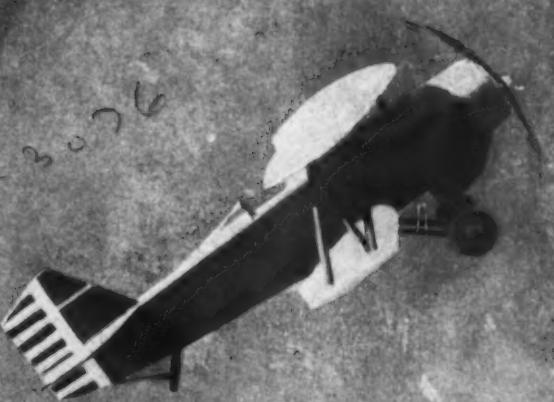


MODEL AIRPLANE NEWS



8-3-74



How to Build a Tri-Motor Ford Monoplane Model

Starting a Thrilling Serial
by LAURENCE DONOVAN

The FLYING BLACK SHEEP

The MAN THEY DIDN'T GET



The Surest Way to Athletic Health and Strength is the Physical Culture Way

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Note to Parents

PHYSICAL CULTURE is a practical self-help magazine devoted to showing how to aid nature in the process of building and preserving the perfect health which is the birth-right of every human being. If you are not already familiar with this remarkable magazine, may we suggest that, for your own sake and the sake of those dependent upon you for guidance in health matters, you start reading it with the current issue?

Physical Culture

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Vol. I

No. 1

MODEL
AIRPLANE NEWS

July, 1929

WHERE TO LEARN TO FLY (Schools we can recommend.)	3
A MESSAGE TO FATHERS AND MOTHERS	The Editor 5
THE FLYING BLACK SHEEP (Serial)	Laurence Donovan 6
A thrilling story of two boys who longed to fly.	
FILM FLIGHTS (Model Airplane News in pictures.)	14
A HEADWAITER'S HOBBY	O. H. Kneen 17
The man who made a perfect model.	
MY GREATEST THRILL	Caterpillar Minus 20
A famous ace tells of his first parachute jump.	
HOW TO BUILD A TRI-MOTOR FORD MONOPLANE MODEL	21
Full instructions with complete full-size working plans.	
WHY I AM INTERESTED IN AVIATION (Contest)	33
Write a letter and win a prize.	
THE MAN THEY DIDN'T GET	Robert A. Plunkett 34
A story of a man who dared the Royal Northwestern Mounted Police.	
THE MACFADDEN AVIATION ADVISORY BOARD (Question and Answer Department)	42

IN OUR NEXT ISSUE

NO EXCUSES ACCEPTED—A Thrilling Short Story

COMPLETE, FULL-SIZE WORKING PLANS FOR BUILDING ANOTHER
WONDERFUL MODEL AIRPLANE

Published Monthly by MODEL AIRPLANE NEWS CORP., Washington and South Aves., Dunellen, N. J.
Editorial and General Offices, Macfadden Building, 1926 Broadway, Dunellen, N. J.

James F. Williamson, President

Wesley F. Page, Secretary

Gilbert L. Parks, Advertising Manager, Graybar Building, 420 Lexington Ave., New York, N. Y.

Application for Second Class mailing privileges pending at Post Office at Dunellen, N. J.

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Price 15c a copy in U. S. and in Canada. Subscription price \$1.50 a year in the United States and its possessions; also Canada, Cuba, Mexico and Panama.

All other countries \$2.00 per year.

Chicago Office: 333 North Michigan Ave., C. H. Shattuck, Manager.

London Agents: Atlas Publishing & Distributing Co., Ltd., 18 Brize Lane, London, E. C.

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Where To Learn To Fly

All schools found in this directory are recommended by the Macfadden Aviation Advisory Board and can be relied upon as being schools of high character and standards. No school is acceptable in these columns until it has passed the standards set by the Macfadden Aviation Advisory Board, and its advertisement here testifies to its high rating.

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"Ten hours of flying will not make anyone a pilot, and \$100.00 will not buy a good course in training. The man or woman who wishes to become a pilot should be prepared to spend at least \$500.00 for the training, and some agreement should be reached whereby the use of a plane for practice may be obtained after the course has been completed.

"A great many serious aviation accidents occur because of pilots who are turned out of cheap schools, without sufficient experience to meet emergencies."

The Macfadden Aviation Advisory Board, which serves the readers of MODEL AIRPLANE NEWS through a question and answer department, recently made an exhaustive survey of aviation schools with the view of better serving you who are interested in schooling for this new industry.

The Board found that Colonel Lindbergh had put the situation mhdly, so it immediately set about obtaining data for its readers concerning this subject. Hundreds of questionnaires were sent to schools by the Board and upon their return all were carefully studied and classified. The result of this survey places the Board in a position to recommend schools worthy of such recommendation, which it has done in numberless cases, for the safety of its readers.

MODEL AIRPLANE NEWS has decided on a policy which makes it impossible for any school to advertise in this magazine, which has not been passed upon by the Board and accepted by them as reliable and worthy of your consideration.

While only schools of this class are allowed to advertise in MODEL AIRPLANE NEWS, it should not be taken to mean that schools not found ad-

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vertised in this publication are unworthy. The Board is in no way influenced by schools which advertise in these pages, and will gladly recommend any school it considers worthy.

It must be understood, however, that neither MODEL AIRPLANE NEWS nor the Macfadden Aviation Advisory Board can in any way accept responsibility for any agreements, statements, or contracts made between its readers and schools found in its pages.

The first thing a young man or woman should do when considering aviation as a vocation is to choose the type of work he or she is best fitted for, and then master that subject. Too many fail to realize that aviation offers many and varied positions, aside from that of actually piloting a plane. A pilot's job is but a part of the whole, and a small part. There are twenty positions on the ground to every one in the air. Many of these ground jobs command greater remuneration than those in the air and those wishing to enter this great industry should consider wisely before starting their schooling.

In the case of those who long to pilot our great dreadnaughts of the air, and who wish to prepare for such a vocation, we strongly recommend that before signing up for any course in flying you visit your local doctor who is authorized by the Department of Commerce to give you the physical examination necessary to obtain a license, and thus make certain that after passing your course of instruction you will be eligible for a pilot's license.

Many have failed to take this precaution, and after spending good money and wasting valuable time, find that they are not qualified physically. If you cannot locate the Department of Commerce doctor in your city, write the Macfadden Aviation Advisory Board and his name and address will be sent you.

After assuring yourself of the physical aspect of your ease, write the Board and ask for a list of the best schools in the state or city in which you wish to take your training. Such a list will be prepared for you and sent immediately.

The Board will also be glad to give you the cost of various courses at any school you may wish to attend, but ask that you do not request comparisons between schools. These we cannot make between schools we consider worthy of recommendation.

This is a MODEL AIRPLANE NEWS service for which there is no charge whatever. It belongs to you! Avail yourself of it! Better to be safe than sorry!

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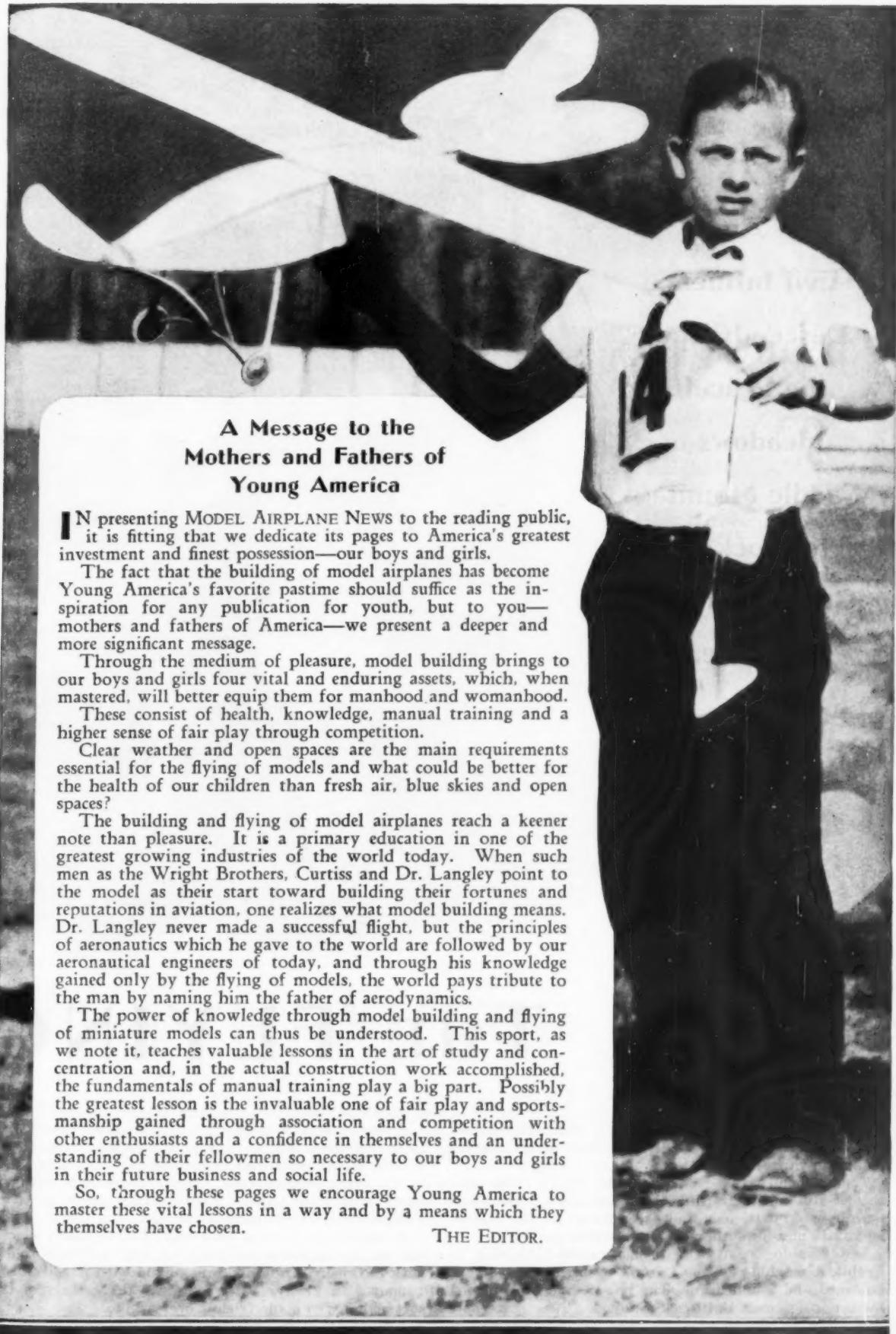
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A Message to the Mothers and Fathers of Young America

In presenting MODEL AIRPLANE NEWS to the reading public, it is fitting that we dedicate its pages to America's greatest investment and finest possession—our boys and girls.

The fact that the building of model airplanes has become Young America's favorite pastime should suffice as the inspiration for any publication for youth, but to you—mothers and fathers of America—we present a deeper and more significant message.

Through the medium of pleasure, model building brings to our boys and girls four vital and enduring assets, which, when mastered, will better equip them for manhood and womanhood.

These consist of health, knowledge, manual training and a higher sense of fair play through competition.

Clear weather and open spaces are the main requirements essential for the flying of models and what could be better for the health of our children than fresh air, blue skies and open spaces?

The building and flying of model airplanes reach a keener note than pleasure. It is a primary education in one of the greatest growing industries of the world today. When such men as the Wright Brothers, Curtiss and Dr. Langley point to the model as their start toward building their fortunes and reputations in aviation, one realizes what model building means. Dr. Langley never made a successful flight, but the principles of aeronautics which he gave to the world are followed by our aeronautical engineers of today, and through his knowledge gained only by the flying of models, the world pays tribute to the man by naming him the father of aerodynamics.

The power of knowledge through model building and flying of miniature models can thus be understood. This sport, as we note it, teaches valuable lessons in the art of study and concentration and, in the actual construction work accomplished, the fundamentals of manual training play a big part. Possibly the greatest lesson is the invaluable one of fair play and sportsmanship gained through association and competition with other enthusiasts and a confidence in themselves and an understanding of their fellowmen so necessary to our boys and girls in their future business and social life.

So, through these pages we encourage Young America to master these vital lessons in a way and by a means which they themselves have chosen.

THE EDITOR.

An
Evil Influence
Descends Upon
the Peaceful
Meadows of
Saddle Mountain
to Mock at a
Great Friendship
and Then—

"What about it, Tommy?" the sheriff said. "Where was your father when Mr. Wickers was shot?"

DATING from his sixteenth birthday, life underwent a swift change for Tommy Carew. An evil influence descended upon the Saddle Mountain country in which he lived.

Neighbors who had been friends for years suddenly avoided each other. Tommy's dad, Andy Carew, ceased speaking to Tad Wickers' dad, although the two families shared one of the little valleys of the Saddle Mountain ranges.

Tommy's dad was a cattle rancher. Tad's father ran sheep. But until this time there had never been a dispute between cattlemen and sheep owners. The Saddle Mountain meadows afforded ample grass for all.

The trouble began when some cattle belonging to Nesbit, a neighbor of the Carews over the range, were poisoned and found dead. The poison had been placed in a spring near Splitneck Canyon. This waterhole was close to sheep meadows that lay in the canyon itself.



THE FLYING

A few days later nearly a hundred sheep were killed by savage dogs that had never before been seen in the Saddle Mountain region. Two of the dogs were shot by an angry sheep-herder. In the week that followed more sheep were killed. Then another drove of cattle was poisoned at the canyon spring.

At the time this feud broke out, Tommy had just celebrated his sixteenth birthday. A tall, well-knit youth, with the clear, farsighted eyes of the born mountaineer, Tommy had always led a carefree life. He was the sort of lad who made friends everywhere.

Tommy's particular pal was Tad Wickers. Together they attended the mountain school and together they



A Story of
Two Boys
Who
Longed to
Fly

By
LAURENCE
DONOVAN

BLACK SHEEP

had planned their future. Both had become what Colonel Charles A. Lindbergh has described as air-minded. They read every scrap of information on flying that came their way.

On Tommy's birthday, his dad, who had wonderful sympathy and understanding for the ambitions of boyhood, had given Tommy a copy of "WE," the book written by Colonel Lindbergh after his history-making flight across the Atlantic. As soon as he had it, Tommy had signaled with his bird-whistle across the valley to Tad. Tad had answered with a similar "Bob White" call.

Together they read chapter after chapter, pausing

sometimes to look up and study the wheeling flight of the old gray eagle that nested on one of the funny humps of Saddle Mountain.

"Some day I'm going to build me a cabin on that peak and fly there in my airplane away from everybody," said Tommy enthusiastically.

"Me, too," said Tad, and they shook hands on it solemnly.

Later, on the same day he had pledged the vow with Tad, Tommy was in the cabin at home when he heard a loud humming in the air. He ran outside. As he looked up, a shadow passed over the sun and ran along the ground. He saw a black-winged airplane flying low.

Tommy called to his younger brother, Jack, and to his sister, Martha, to come and see the plane. As they reached the door the plane soared over the tops of the giant fir trees, across the valley, and vanished. Tommy had a queer feeling. He had a vivid imagination and after the plane had disappeared, he fancied

that it had left its shadow on the ground all around him.

Tommy could not shake off the feeling that this was an omen of some kind. When war flamed up between men who had long been kindly neighbors, Tommy did not understand much about it, but he could not get rid of the feeling that the black airplane had something to do with it.

For all that Tommy expected some day to become a flyer, he had not thought far enough ahead to visualize leaving Saddle Mountain. With its scattered hills, its deep woods, its fish-filled streams and deer-haunted valleys, Saddle Mountain was a veritable playground.

BUT suddenly all of this had changed. Every canyon and thicket might be concealing an enemy. Owners of sheep and owners of cattle began carrying their rifles. Tense feeling was in the air.

Tommy's dad had said little about the trouble, but one morning he came into the cabin from up the trail, his face cold and white with anger. He had had no less than two hundred steers feeding in an upper meadow. Nearly a hundred had been taken with the poison sickness and many of them were dead.

Tommy's dad had always been friendly with everyone, but the day the cattle were poisoned his eyes grew stern and hard.

"I don't like to think it," he said to Tommy's mother, while Tommy was listening, "but I saw old Art Wickers sneakin' up the trail from Splitneck Canyon late yesterday. He hasn't any sheep up there and I don't know what he was doing. He didn't want me to see him, because he left the trail and slipped through the woods."

Tommy's dad hesitated as if he did not want to accuse any man, but finally said slowly, "Our steers got the poison from that Splitneck Canyon spring some time last night."

Just then Tommy heard a clear, bird-warble whistle ring out across the valley. He stepped to the door and started to whistle in response, when his father laid his hand on his shoulder.

"Sonny, p'raps it would be just as well if you didn't run around with Tad Wickers any more. Looks like there's a heap of trouble comin' and we've got to be on the right side."

It was the first big hurt Tommy had ever had. He had always been accustomed to obeying his dad, but when he and Tad had been pals for so long, it didn't seem possible to Tommy that anything was big enough to come between them. However, he did not answer Tad's whistle and he knew Tad would wonder.

But the next day when he met Tad on the trail at the foot of the mountainside he forgot all about what his father had said and began talking with him. Tommy's brother and sister, Jack and Martha, had heard their father's command. They were younger and quick to take sides.

Jack and Martha came along the trail while Tad and Tommy were together. Jack, having a sharp tongue, called out, "Tommy, you'll catch it when you get home."

Tommy remembered and told Tad what his father had said.

"But it won't ever make any difference between us," he added in haste. "You and me will always be good pals, won't we, Tad?"

"An' your dad thinks mine poisoned your cattle?" said Tad slowly. "Well—I guess we can't help what our fathers do, but I don't think it's right to think anything like that about my dad."

Tommy's face fell. He hadn't thought much about that part of it.

"But I don't think your dad did it," he said quickly. "Didn't we take the oath by the lightnin'-split cedar that we'd stick to each other through thick an' thin,

an' whatever one got he would always share with the other?"

"Ye-es," admitted Tad, but his tone was doubtful. "I guess maybe things will come out all right."

But after Tad had left him, Tommy went sadly up the trail toward home. Somehow he knew that things would never be the same again with Tad.

For several days Tommy and Tad talked to each other when they met. Tommy's dad had talked the affair of the poisoning over with the other cattlemen, but nothing had been brought out openly. Tommy hoped the whole thing would be forgotten.

Then one evening he heard his brother Jack talking to some other boys.

"Tommy's a Baa-Baa-Black-Sheep, that's what he is. He runs around with Tad Wickers and Tad's dad is nothin' but a sheep-herder an' he poisoned my dad's cattle," Jack said.

Tommy got hold of Jack and made him go home, but the harm had been done. He began hearing the name on every side.

"Baa-Baa-Black-Sheep."

In a few days some of the boys his own age would yell at him from a distance, shortening the name to "Baa-Baa."

Tommy came in late one evening from herding his dad's cattle to a new spring. That afternoon his dad had said he was going to the poisoned spring in Splitneck Canyon to clean it out. It had been dark more than an hour when Tommy got home.

As he came across the clearing in front of the cabin, two cattlemen, Jones and Nesbit, came toward him carrying something. Tommy turned sick when he saw that it was his father. One of his father's arms hung limp at his side and his hand was all bloody. He had been shot through the shoulder while he was at work on the spring.

"I didn't see who it was fired the shot, but while I was lyin' there by the spring, I saw old Wickers come down the canyon trail carryin' his rifle, an' when I called to him he sneaked off to one side an' went 'round through the woods," Tommy's dad told the other cattlemen.

Tommy, grief-stricken at seeing his father lying there hurt and helpless, ran over to him.

"Dad, I'll never talk to Tad Wickers again," he promised in a choking voice.

Tommy's dad changed a lot after he was shot from ambush. He had always had long talks with Tommy and he nearly always talked of his business affairs before all of the family. Now he grew silent.

ONE afternoon he came in and sent Jack and Martha from the cabin.

"I want you to hear this, Tommy" he explained. "Mother, I'm afraid maybe we're going to have to sell out and leave Saddle Mountain. Some more of our cattle have been poisoned. I won't have any money to send Tommy and the others away to school."

He walked to the door and made sure Jack and Martha were out of hearing.

"And," he continued, "Nesbit was shot and badly hurt this morning. He was up in Splitneck Canyon, too, and he didn't see who shot him. I don't know—I don't like to say—but I saw Wickers again comin' from up there about noon. He was carrying his rifle."

Tommy's heart almost stood still. It made him think that he had almost forgotten his promise to his father. He had wanted to see Tad so much and talk things over. He had an idea that maybe Tad and he could figure out some way to end all of this trouble.

"I'm goin' up the canyon an' have a look around,"

said his dad, taking his own rifle from the deer-horn rack above the fire-place.

Tommy's dad had never carried his rifle unless he were going hunting. But he added, when he saw Mrs. Carew was worried:

"We need some fresh meat and I saw some buck tracks not far from the spring a few days ago."

Tommy wandered aimlessly across the mountainside. He wondered if it would be unfair to his dad for him to see Tad. Tommy felt that he was nearly a man now. What his dad had said about their needing money and Tommy's going away to school made him think of his one big ambition.

HE had read Lindbergh's "WE" a dozen times. Each time he got a fresh thrill. He had made up his mind that he was going to be an aviator. It came to him now that perhaps he could learn to fly instead of going away to school, and then he could help his dad.

Thinking deeply about his future and what his dad had said, Tommy had wandered two or three miles through the deep woods. Suddenly he heard a rifle shot above him on the mountain. It came from Splitneck Canyon. He thought perhaps his dad had killed a deer, so he started in that direction.

In a few minutes he heard another shot ring through the woods. He hurried toward the spot. He came out of the woods on the winding trail that went up the side of the canyon. Tommy had never been far in that direction. Above Splitneck Canyon the bush was thick and the mountain was cut into sharp hogbacks or sharp-edged hills that no man could climb.

He was on the canyon trail just below the spring where his dad's cattle had been poisoned. A wide, grassy place had been tramped clear by the hundreds of cattle that had come there in the past to drink the ice-cold water. In the middle of this grassy space lay a man.

Tommy had never before seen a dead man. He did not know this man was dead until he came up close to him, and then he saw a bullet hole in his forehead. Tommy felt a wave of horror sweep over him. He was badly frightened. If the man had been a stranger it might have been different, but the dead man lying there with his arms sprawled out, his rifle lying a few feet away, was Tad Wickers' father.

For a minute Tommy could

not move. Then he turned and ran as fast as he could back down the trail toward home. All he could think of was that he should bring some one quickly. In his excitement he had forgotten about his dad being somewhere near-by.

Turning a bend in the trail, after he had run a quarter of a mile, he came suddenly upon his dad. He was standing off to one side of the trail, using a piece of cloth on the end of a slender stick to clean his rifle. He did not see Tommy until he was almost upon him.

"Oh, hello," said his dad. "Where've you been an' what's all the hurry?"

Tommy stopped. He was speechless. He tried to think of something to say. In all of its fearful significance the presence of his dad and the cleaning of the gun burst upon him.

"Why—I—I heard someone shoot an' I came up—"

He looked up into his dad's usually kindly face. He imagined that it had changed into some kind of a stern mask. He had not understood his dad very well these past few days.

"Yes," said his dad quickly. "I saw a deer running through a ravine. I shot at him. I guess some one else must have seen him, too. I heard another shot right afterward."

Tommy wanted to believe that. Oh, how much he wanted to! But his dad's next words seemed to his excited brain to be full of suspicion.

"See anything up the trail?" he asked.

"Yes sir," stammered Tommy, his voice shaking. "A—a dead man. Mr. Wickers. He's—he's been shot."

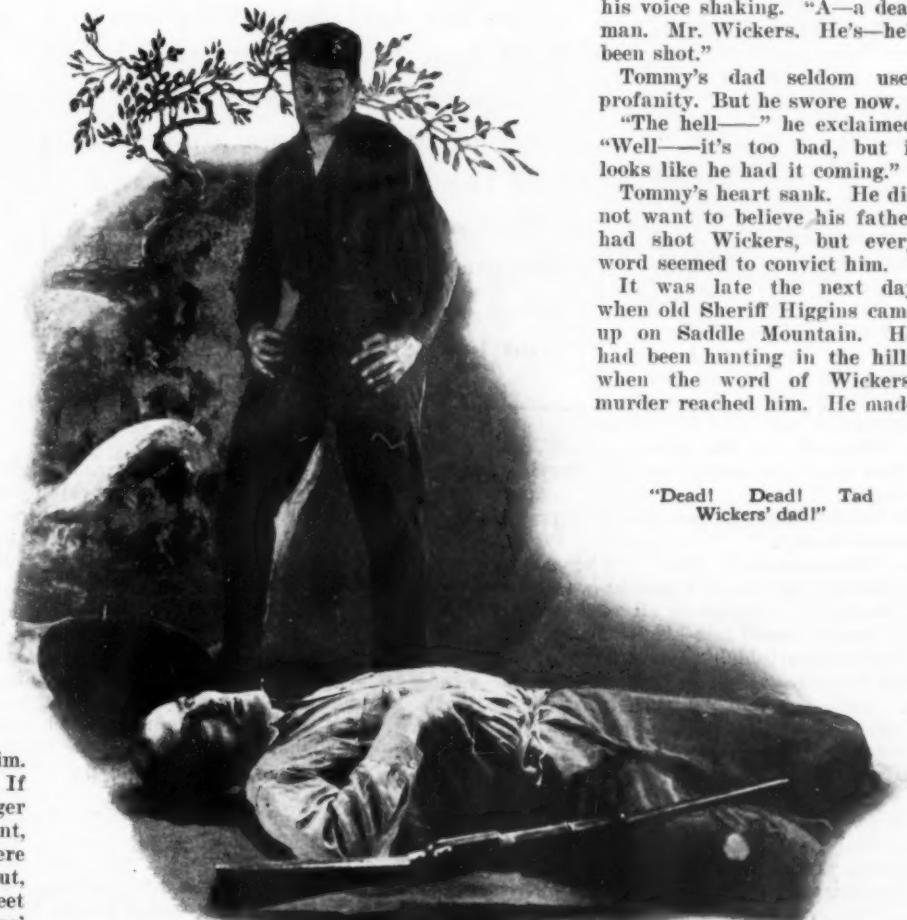
Tommy's dad seldom used profanity. But he swore now.

"The hell—" he exclaimed. "Well—it's too bad, but it looks like he had it coming."

Tommy's heart sank. He did not want to believe his father had shot Wickers, but every word seemed to convict him.

It was late the next day when old Sheriff Higgins came up on Saddle Mountain. He had been hunting in the hills when the word of Wickers' murder reached him. He made

"Dead! Dead! Tad Wickers' dad!"



quick time to the troubled region, convinced that the death was the result of the cattle and sheep war and that he had only to find the guilty cattleman.

The sheepmen were quick enough to clinch the sheriff's belief. Every finger among the sheepmen pointed to Andy Carew. As for Carew himself, he had gone about the place in silence all day, giving Tommy instructions about the cattle and the gathering of the fall garden, and Tommy knew that his dad was sure he would be accused.

Sheriff Higgins had known Andy Carew for many years. He stood in the main room of the Carew cabin, his face grave and his eyes sorely troubled.

"Is there anything you want to say, Andy?" he asked.

"Anything about this thing you might want to tell. Were you at home at the time Wickers was shot?"

Little Jack spoke up quickly.

"Dad was out workin' in the garden all yesterday afternoon," he declared. "I—he had me helpin' pull weeds."

Tommy's sister, Martha, was quick to catch her younger brother's cue.

"Why, yes, daddy wasn't away until he went up with the men to bring Mr. Wickers down," she said loyally, without a tremor in her voice.

Andy Carew looked at his two younger children. His eyes were strangely moist. His eyes turned to Tommy.

"And what have you to say, Mrs. Carew?" the sheriff asked Tommy's mother. "I don't want to bother—that is, I'm sorry, but maybe you could help clear this up."

Mrs. Carew had been ill for a long time. Perhaps she saw her little home about to be wrecked, her family about to be disgraced.

"It's—it's as the children say," she sobbed weakly, burying her face in her hands.

Sheriff Higgins was plainly puzzled. His gaze fell upon Tommy.

"What about it, Tommy?" he asked in a voice that indicated he almost hoped he was being told the truth. "Was your father here all yesterday afternoon?"

Tommy looked into his father's eyes. His dad! Something there told him the answer, and he straightened up bravely.

"Dad, you told me always to tell the truth. He—he wasn't home yesterday afternoon, Mr. Higgins. He was—was on the trail when Mr. Wickers was shot. He said he'd shot at a deer."

Tommy's younger brother and sister flew at him in a rage.

"Baa-Baa Black Sheep!" screamed the hot-headed Jack. "You ain't tellin' the truth. You—you're in with the sheep-herders. Dad was here—here all the time—"

Tommy's dad, a wistful smile on his face, stepped forward and caught the screaming Jack by the shoulder. A tear rolled down his cheek.

"Tommy's telling the truth, Sheriff," he said quietly. "Never mind, Jack—Martha—mother. Tommy's been taught never to lie, but—" his voice trembled, "I'm proud of all of you—just don't worry—things'll come out right somehow."

When Tommy's dad had gone away with the sheriff, Jack and Martha turned their furious tongues on Tommy. They accused him of sending his own father to be hanged, and Tommy made no answer.

"Baa-Baa Black Sheep!" rang in his ears.

The injustice of the name as well as the blame put upon him burned in his heart. But with silent heroism he turned to the task of filling his father's place.

Something worse than the shadow of death hung over the Carew household. With Tommy's dad held in jail at the county seat, while the district attorney sought further evidence to convict him of the murder of Wickers, the story of Tommy's action spread quickly.

Children of the cattle-men shunned Tommy when they met him on the trails. Some of the older ones continued to call him "Baa-Baa," and now they had scornful derision in their tones. Even Tommy's own mother would look at him sometimes through her tired eyes as if she felt that he was somehow responsible for his father being taken away.

LUCKILY for Tommy, the absence of his father put upon him the burden of caring for the little cattle ranch and of looking after the family. With the tongues of neighbors bitter against him, feeling that even his own brother, sister and mother hated him, Tommy underwent the change from the life of a care-free boy to that of manhood with its stern demands.

A tall, husky lad he was, with the clear, farsighted blue eyes of the born mountain boy. Now his shoulders suddenly broadened as he carried his head high and strove to ignore unpitying insults that were uttered in undertones and openly when he was near. He had heard the sneering "Baa-Baa" so often that it did not matter much any more.

Tommy was learning one of the greatest lessons of life. Real manhood is within oneself and when one is right in his heart, the opinions of others mean nothing. And he was busy. First, he gathered and safeguarded the cattle, figuring which could be fattened and sold to help provide money for his father's defense at the trial. Then he began staying at home and studying books on aviation for which he had sent.

Some day, thought Tommy, everything must come right. Then the door of the cage would open and he could literally fly away to take his place in a new world. Yet, all the time, he knew he did not want to leave his beloved Saddle Mountain and all of those who had been his friends—and Tad.

One day, about a month after his father had gone

"WHAT about it, Tommy?"
the sheriff asked. **"Was your father here all yesterday afternoon?"**

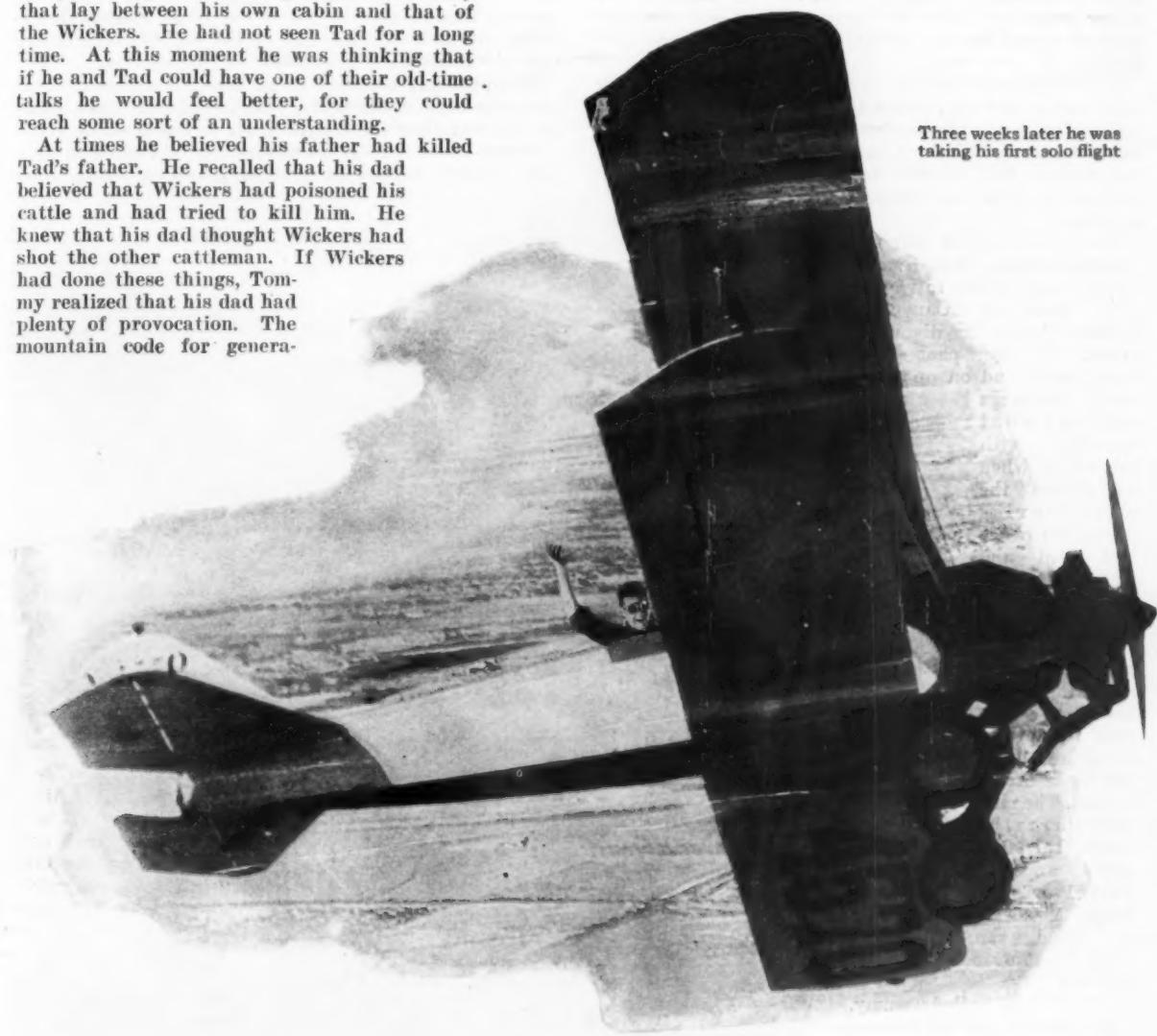
Tommy looked into his father's eyes. His dad! Something there told him the answer and he straightened up bravely.

"Dad, you told me always to tell the truth. He—he wasn't home yesterday afternoon, Mr. Higgins. He was—was on the trail when Mr. Wickers was shot. He said he'd shot—"

away, Tommy was coming down the valley that lay between his own cabin and that of the Wickers. He had not seen Tad for a long time. At this moment he was thinking that if he and Tad could have one of their old-time talks he would feel better, for they could reach some sort of an understanding.

At times he believed his father had killed Tad's father. He recalled that his dad believed that Wickers had poisoned his cattle and had tried to kill him. He knew that his dad thought Wickers had shot the other cattleman. If Wickers had done these things, Tommy realized that his dad had plenty of provocation. The mountain code for genera-

Three weeks later he was taking his first solo flight



tions had been a life for a life. Everyone knew that.

Then sometimes Tommy had a sense of knowing that his dad was innocent, and that something far more sinister than a mere dispute between sheepmen and cattlemen had crept into the valley. At such times the passing of the black-winged airplane recurred to Tommy's mind. Again he could see the shadow suddenly darkening the sun, as it had done on his sixteenth birthday, seeming to fall around him and to linger.

Then there were Wickers' mysterious visits to Split-neck Canyon—the sudden poisoning of cattle, the killing of sheep, the shooting from ambush, and no one on either side could say where it had all begun. Neighbors who had been friends for years went heavily armed and eyed each other warily. Since the murder of Wickers there had been no other killings. A few cattle had disappeared without trace, but these might have wandered away into the wilderness hills.

As he came along the valley Tommy's mind was turning over and over all of these things. Then he saw Tad in the distance. His former pal was walking with his head bent. He walked with a stoop and Tommy suddenly felt a warm wave of sympathy for him. After all, Tad had lost his father. He, too, had been transformed overnight from a carefree boy into a man, aged

far beyond his years. For a moment Tommy forgot everything. He quickened his step and came face to face with his old pal. Tad looked up. Tommy saw that his face was pale and drawn.

"Tad, ol' skookum—"

Tommy used the old Indian term for "friend." It had been a byword between them.

Tad straightened quickly. His eyes were cold and hard. He looked straight at Tommy as though he did not see him. Then his lips tightened and he bit off two sharp words.

"Black sheep!"

Without another word or look, he turned to one side and walked away into the woods.

More than all the other rebuffs with which he had met, this action of Tad's cut Tommy to the core. Bitter and sore at heart he turned up the valley toward home.

What was the use? What was the use?

Something inside him cried out to leave Saddle Mountain. To go outside and build his life in his own way. Through no fault of his own he had lost every friend—even the boy he had loved as a pal.

It was well for Tommy that something happened then. A fog had lain over the peaks of Saddle Moun-

tain all afternoon. Coming out of the fog, Tommy heard a low humming. It grew louder. There was one final roar of sound not far away, and then it ceased altogether.

Before Tommy's amazed eyes a white-winged airplane shot out of the fog. Tommy could tell that the pilot was in trouble. His engine had stopped. There were many meadows in which the plane might have landed, but Tommy had learned enough to know that it was too low down to reach any of these.

Surely enough, it dived, straightened out, then dived again and was lost to view over Splitneck Canyon. Tommy heard a distant crash. He ran past his home cabin and on up the trail. His lungs were almost bursting with the effort when he passed the poison spring where the cattle had died and where he had found Wickers' body.

Tommy was some distance above the spring when he saw a man coming toward him from the rocks of the canyon. The man was carrying some leather sacks and he walked with a limp. A trickle of blood ran from a cut over one eye.

"Hi ya!" he hailed Tommy.

In spite of his battered appearance, the man's gray eyes were twinkling. He laughed.

"Anybody home?" he asked Tommy, the grin going into his voice. "Kinda dropped in the back way, young fellow, but for gosh sakes, I sure was glad to land anywhere after dodgin' the thousand humps on that split-tailed mountain in the fog."

Tommy hurried forward eagerly. He offered to take a couple of the mail sacks and the badly jolted flyer was more than willing.

After he had had his head bandaged, bathed his sprained ankle in hot water, and put a good supper under his belt, the flyer opened up and told Tommy all about it. Tommy felt as if he were listening to some god of the clouds. For an hour he drank in every word the mail flyer had to tell, though of them all, one thing stuck in his mind.

"That crate ain't cracked up much, but she's done for as far as our company is concerned. It'd take the price of a couple of planes to get 'er outa that hole she's in. If you happen to want a pretty good, old flyin' boat, that's got no place to start from an' no place to go, y'd better freeze onto that one."

On the trip down the mountain to a point where he could get transportation, Halleck, the mail flyer, con-

firmed his carelessly uttered statement. He said there was no way to get the plane out with reasonable expense and he would have to report any attempt to salvage the plane as impractical.

When Tommy returned to the cabin a wonderful idea had been born in his brain. Early the next morning he set out to follow the canyon trail to the crashed plane.

It lay under a ledge at the bottom of Splitneck Canyon. It had landed in a thick group of young alder

"Tad! My best friend! Did he—," gasped Tommy



trees and except for a broken landing wheel and a few rents in the wing fabric it had not been damaged. However, the cliff above it was steep and the only trail was the blazed footpath that ran along the ledge.

But Tommy was not disheartened. He had brought an axe along and he set to work cutting some young cedar trees. In a couple of hours he had erected a fairly good shelter that would protect the plane until such time as he could set about salvaging it. He figured that the plane could be taken apart and brought out, then put together again.

WHEN Tommy was nearly finished with his job of covering the plane, by thatching a roof of spruce boughs, he stopped and listened. He was sure he had heard a stealthy step in the underbrush. A twig crackled, but he heard no further sound, so he went ahead with his task.

But from then on, until he was ready to leave the plane, Tommy had a queer, creepy feeling. He fancied that he was being watched. He looked all around, peering into the thickly growing trees and up among the

rocks on the side of the canyon, but he saw no one.

Still the eyes were there. Tommy did not know how he knew, but he was certain he was being spied upon. He knew that the rich meadow land in the canyon had come to be the big disputed territory between the cattlemen and the sheepmen, so he judged that some of the men on one side or the other were watching him.

There was something spooky about that canyon. Tommy was not superstitious and he was not afraid. He had lived too long in the wilderness of the mountain to fear the cougars or the bears. He knew that the only danger there must come from man.



Tommy had no further proof that he was being watched, so he finished lacing the spruce boughs together over the plane. Each time his hands touched the polished wings, Tommy was filled with an elation he had never felt before. Lindbergh had said in his book that some were born to fly and others were not. He knew now that he was one of the chosen few.

Back on the trail above the plane, Tommy looked up and down the narrow valley of the canyon. Something moved close along the wall beneath him. It might have been a deer mousing away on its belly, or a wandering elk, or even a black bear digging for grubs. Tommy tried to believe it was one of the three.

He met some objection at home when he explained his plan to his mother. She was afraid for him, but when she saw that his mind was set on his idea, she said no more. Jack and Martha, changing as children will, cried and begged Tommy not to go away and leave them. By this time they had come to depend on Tommy in place of their father.

But Tommy engaged his brother's and sister's interest when he told them they could begin clearing off an air-

plane landing in the meadow below the cabin, showing them how every bush and stone must be removed and how they must put up markers at the four corners of the field.

Before he reached this stage of his plan, however, he spent a week going around among the cattlemen and such of the sheepmen as were friendly. He showed them how much time and money it would save to have their groceries and other supplies brought in by airplane. It was a five-day trip over a rough mountain trail to Astoria, their nearest supply point.

During the winters nearly all of the mountaineers set traps and caught the smaller fur-bearing animals, and it was a long haul out to take these furs to town. The sheepmen did a fair business in sheep pelts, too, and Tommy pointed out that he could carry in one plane-load as much as could be loaded on the backs of a dozen pack-horses.

Some of the sheepmen looked on Tommy with suspicion and would not deal with him, because his dad owned cattle. A few of the cattlemen believed him responsible for his father being charged with the murder of Wickers and closed their doors in his face. After much persuasion, however, Tommy had a list of about two dozen ranchers who had promised to pay him a good price for bringing in their supplies and taking out such of the lighter stuff as they had to send.

Old man Nesbit, the cattlemen who had been shot and who had recovered, proved to be Tommy's best friend. He advanced Tommy a few hundred dollars on his cattle, and two weeks after the airmail flier had crashed on Saddle Mountain, Tommy started down the mountain on foot on the long trip to Astoria and to the city on the river above which there were flying fields and training schools.

JUST before he went, Tommy went up the canyon and looked at the plane. Nothing had been disturbed so far as he could see. He had had a letter from Halleck, the mail flyer, telling him that the plane had been abandoned.

When Tommy left to go down the mountain, his brother, Jack, was busy with a grub hoe and a shovel on the meadow that was to be made the landing-field. Some of the mountaineers came over and old man Nesbit promised to keep an eye on the place.

Tommy's experience at the flying school was unusual. Having no thought for anything else but learning to fly as quickly as possible, Tommy worked night and day. He was quick to learn the ground lessons, and at the end of three weeks he was taking his first solo flight.

Alone at the stick of the light biplane, Tommy had no fear or hesitancy from the first. He did not want to learn to do foolish stunts, (Continued on page 46)

Film Flights



THEY'RE off! A tournament of miniature airplanes recently held in Los Angeles. Testing out the "Airworthiness" of some entries as they were towed by an automobile

BELOW. A miniature airplane factory recently opened in Los Angeles. Oliver W. Young and Ralph E. Olson, the founders, are shown preparing two seaplanes for their trial flights

Wide World Photos

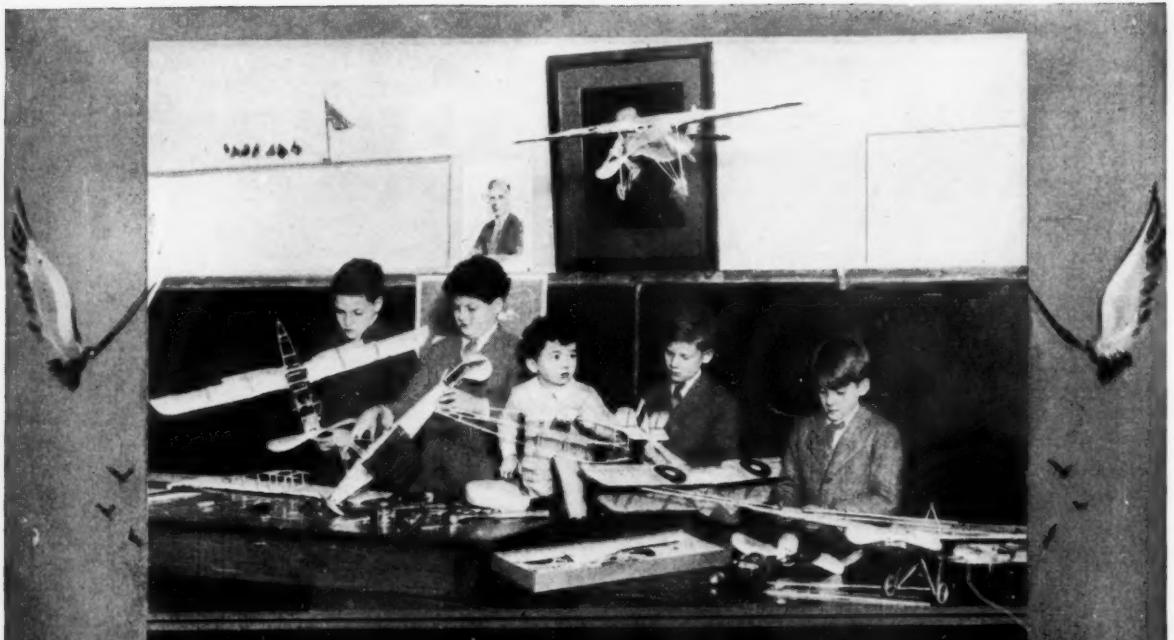




TWO FLYING MODELS

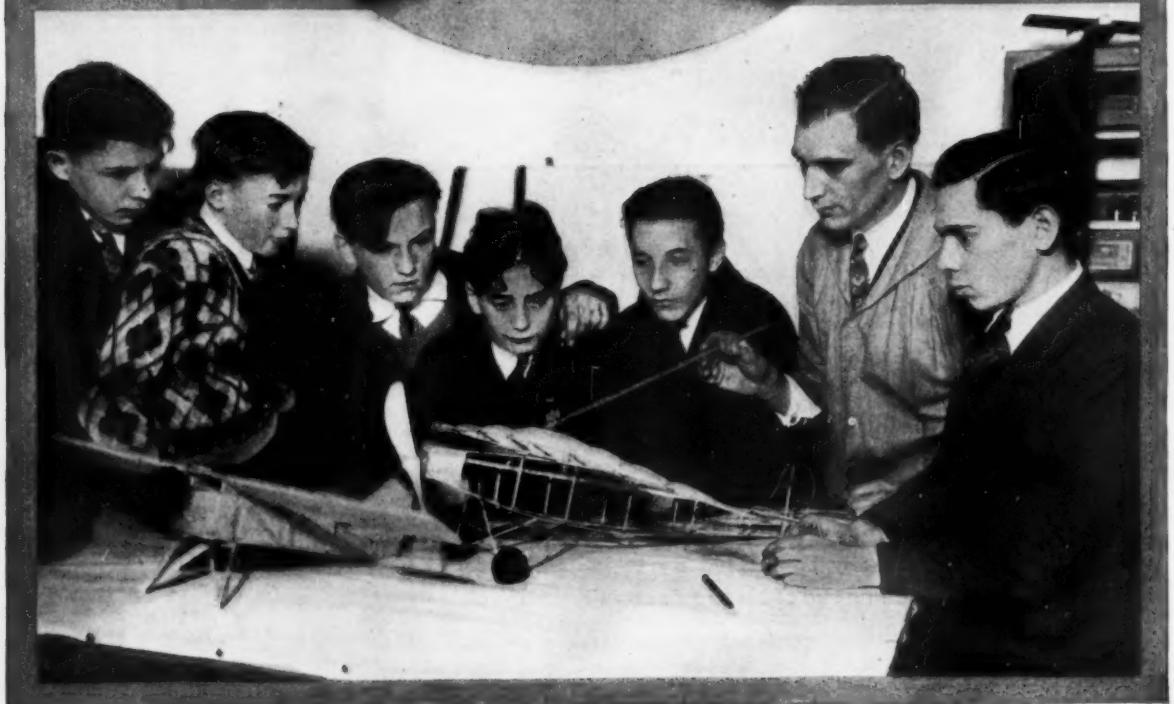
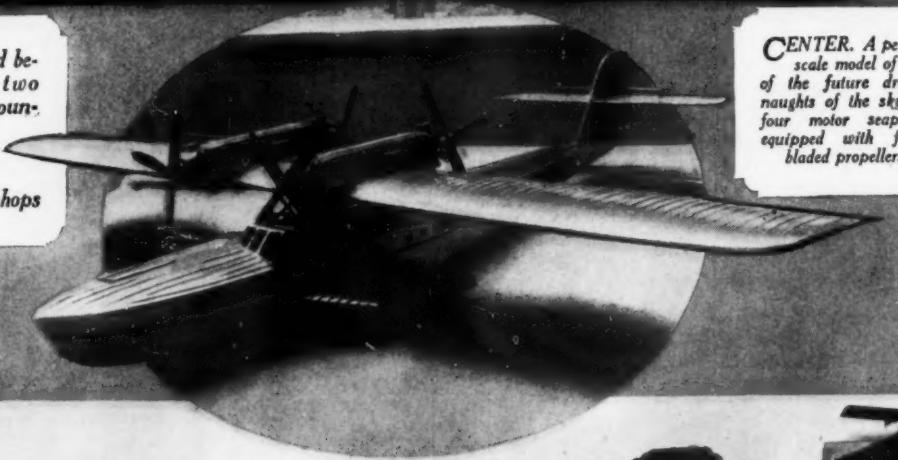
THE kind any boy should try to imitate. Colonel Lindbergh examining a model while two of his friends examine him

International News Photo

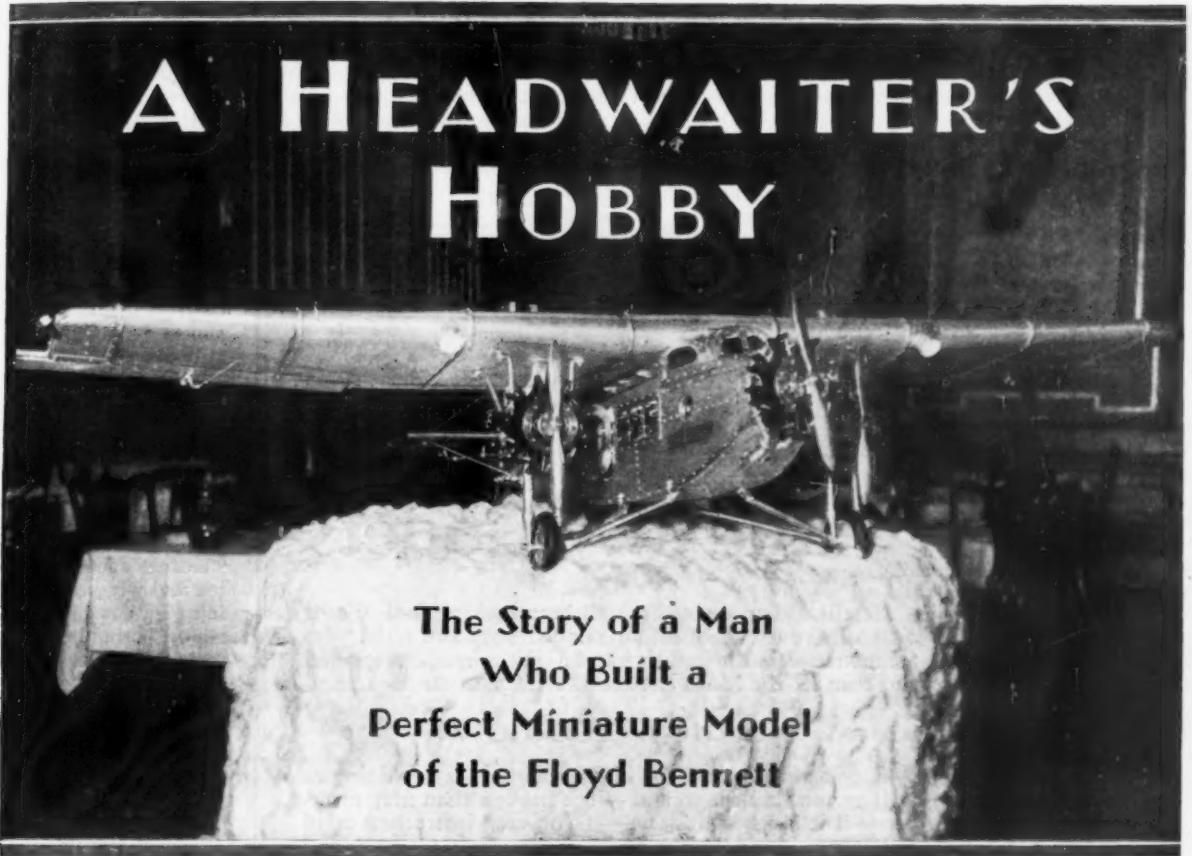


ABOVE and below are two views of this country's future Byrds and Lindberghs in their workshops

CENTER. A perfect scale model of one of the future dreadnaughts of the sky, a four motor seaplane equipped with four-bladed propellers



A HEADWAITER'S HOBBY



**The Story of a Man
Who Built a
Perfect Miniature Model
of the Floyd Bennett**

By ORVILLE H. KNEEN

THOSE who hesitate to start building airplane models, because of lack of experience or tools, will be interested in the story of this great "Floyd Bennett" model, now on display in the largest New York department stores and theaters. This model, with whirling propellers, complete lighting system, working controls and even tiny figures of the crew in the cockpit, is the second model ever made by its builder.

It was constructed and assembled in the back room of a large hotel, during the spare time of the head of the

The model described in these pages is considered the largest, perfect scale, airplane model ever built, having a wing span of eight feet. It is an exact duplicate of a Ford Tri-Motor Monoplane of the type which Commander Richard E. Byrd took with him to the Antarctic and which he named after his friend, Floyd Bennett.

It is a perfect scale model complete in every detail and has been on exhibition in the largest aviation shows, stores and hotels where it has won the praise of all viewing it. Such an achievement as Mr. Klassen's should be an incentive to any boy who wishes to become a model builder of distinction inasmuch as Mr. Klassen has never had aeronautical engineering training in any way.

THE EDITOR

dining room service. With no previous mechanical experience of any kind, and only a few common tools, he made his first model. Newspaper pictures and some views of the interior took the place of blueprints. But he did have intense interest in airplanes, plus a vast amount of stick-to-it-iveness.

I found Mr. Klassen in the big dining room which he has managed for years. He is a big, wholesome boyish-faced man, and his eyes sparkled with enthusiasm as he led me to his shiny model, perched on a white-covered table in the center of the room. Here it was on show for some

time before it went to the New York Aviation Show.

No wonder William Klassen was proud of his second effort in model making!

"Watch out for the propellers!" he warned me, as he reached for a switch. Instantly the three polished "props" began to whirl, and in a few seconds were throwing a strong breeze toward the rear. The lights now went on, illuminating the interior of the cabin, and flashing red and green at the ends of the wing. The landing lights were on another switch.

"I had to figure out the landing lights myself," he explained. "None were provided when the plane was first built, and there were no pictures of them. But I knew they must be installed, for landing in the night. Later I saw a picture of the lights that had been put on the 'Floyd Bennett,' and I found I had put them almost exactly where they now are on the big plane."

A number of other similar points showed how well he had mastered the design of airplanes, which was his real object in building the "Floyd Bennett." The elevators, ailerons and rudder were connected by little chains to the cockpit, and can be moved by hand.

Peeking into the cabin, I saw the fur-clad figures of "Commander Byrd" and his crew, seated in little doll-chairs, their hands on the controls. The rather "babyl-faced" commander had a toy pistol stuck in his belt, and a toy pair of binoculars hung around his neck. His eyes were fixed on the instrument board, on which various dials were painted realistically.

"How large is it?" I asked, as I backed away from the large table to get a more satisfactory view.

"The wing spread is eight feet," he replied. "I

measured the pictures I had, and made it one inch to the foot. It weighs 102 pounds, and is just 66 inches long from nose to tail. As far as I know, it is the largest airplane model ever built, and its size presented a number of problems which smaller models do not have. The wing, for instance, had to be reinforced on the inside by an angle-iron, which runs the full length and makes it perfectly stiff.

"The frame is of duralumin rod, $\frac{3}{8}$ inch diameter, which cost me \$1.10 a pound. The same light but strong material is used for other parts. The fuselage covering and wing covering I cut from ribbed aluminum, which comes in sheets at forty cents a square foot, and is used for the running boards of automobiles."

I asked him how he got the size and shape of the many different parts.

"I just scaled them from the pictures," he replied. "Wing sections and some other parts were hard to figure out. I guess I wasted \$10.00 worth of aluminum sheet before I got the wing sections right, and I made four pilot houses before I had one that suited me. But the propellers were the worst. So I went out to the airdromes and got acquainted with the mechanics and engineers out there. They gave me the dimensions, and I filed the first one out of a flat bar of aluminum alloy, $1\frac{1}{8}$ inches wide by $\frac{3}{4}$ inch thick.

"Then I twisted this $16\frac{1}{2}$ degrees, and added these two brass 'bosses' one each side of the hub. I took this out to the field, and no one would believe I had filed it out of a bar. It took several weeks of spare time to finish it, and to polish the two others I had cast at a foundry, using the original one as a pattern."

Those who are making models and get impatient, will



Here is a chance you have all been looking for! Form a club in your city of all air-minded boys and girls, who are interested in the building and flying of model airplanes, and then let the MACFADDEN SKY CADETS do the rest.

WE SHOW YOU HOW!

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Take part in the many national tournaments being held all over the country. Win prizes! Become a leader—a Squadron Commander—a Flight Commander, as thousands of Sky Cadets are doing!

Any boy or girl, or any group of boys or girls, or any club already formed, who wish the help of the MACFADDEN SKY CADETS, fill out the form below and we will gladly send all information necessary.

Full Name.....Age.....

Address.....

Have you a club already formed?.....Do you wish to form a club?.....How many can you interest in your city?.....Boys?.....Girls?.....

Mail this to the Macfadden Sky Cadets, Macfadden Publications, 1926 Broadway, New York City.

be encouraged when they learn that Mr. Klassen spent three months of spare time—he goes "off duty" at nine o'clock in the evening!—on the fuselage alone. Often he worked on Saturdays and Sundays, sometimes making trips to the flying fields to get help. The wings took four months. For the "engines" he bought three little Universal motors (operated on direct or alternating current), each 1/20th horsepower, 1500 r.p.m. Around these he built gas nipples which look exactly like cylinders of gas engines, and with electric "BX" cable made the exhaust pipes.

"**W**OULD you like to see my work-shop?" he inquired. I nodded. He took me to the rear of the building, to the foot of an iron ladder. When he climbed this, I followed, and came to a little balcony-room which seemed to have been forgotten when the stairways were being built.

"**T**HIS is where I do all my model making," Mr. Klassen told me. "Here's my bench, which is so small, you see, that I had to make the wing in parts and assemble it outside. Often I have worked on my model till four or five in the morning, then fallen asleep on my little cot in the corner. And many a time, after getting in bed, I have gotten up to make a change here or add something there, which I just thought of."

"You asked what tools I used. Well, there's the vise, hand drill, files and hammer. I have half a dozen sizes of screw drivers, metal shears and pliers. That's all I had. But the most important piece of equipment was this."

He fished out a large, flat box, divided into some thirty compartments, each filled with a certain size of screw, bolt, washer, etc.

"These odds and ends saved me many hours, as I never knew in advance just what size I would need, and hardware stores are not very close to this hotel. I always keep my extra bolts, screws and other parts, each in its proper place. That's one of the many things I learned while building my two models. The 'Floyd Bennett' took me about a year, all told, and I worked almost every day on it, more or less. But now I could make another, just as complete, in about a month."

I learned that Mr. Klassen had never "monkeyed" with tools until he built his first model, a biplane built from pictures of a Curtiss JN-4 training plane. It took him six months, and most of the parts were bought at a five-and-ten store—curtain rod for landing-gear braces, clothes-pins for rudder and ailerons, and so on. The wing spread was 6½ feet. This model he

started soon after Colonel Lindbergh flew the Atlantic. "I wanted to learn all about airplanes," he explained. "So I thought the best way was to build them to a small scale. It certainly is the way to find out every detail. By the time you have figured out and designed every piece, from landing-gear and shock absorbers to lighting system and controls, you certainly know how a plane is put together. Then there are some things on large models which you have to invent for yourself. I made the wing so it could be taken off, with motors attached. The motors can be taken off as well. This helps in packing for shipment. In a model of this size you have to figure out various schemes to put the parts together."

Tens of thousands stopped to gaze at the "Floyd Bennett" during the New York Aviation Show, where it was the largest and most impressive of hundreds of models. It was, in fact, the only tri-motor model of any size in the show, and Mr. Klassen was awarded a beautiful silver cup by Lady Heath, on behalf of the Aviators' Post of the American Legion, which sponsored the show.

SOON after its completion, Mrs. Byrd and Mrs. Bennett, widow of the brave flyer who lost his life while trying to save stranded airmen, inspected it. They pronounced it a surprising likeness of the great Ford plane to which their famous flying husbands so often entrusted their lives.

Requests have come to Mr. Klassen from all over the country, for the loan of the model. It was exhibited at the Architectural and Allied Arts Exposition, in April, and from there was to go to Bamberger's large store in Newark, N. J. Mr. Klassen intends to sell his model, and with the proceeds build some models along ideas of his own. He told me of several ideas which may increase the safety of air travel. Such inventions, so sorely needed today, can come only from men who know aircraft and their construction. Model-making, beyond doubt, offers the very best method of studying airplanes in detail, and already there are thousands who are at work on models of all sizes and kinds. It is a sign of the growing "airmindedness" of this country, especially among young men and boys.

Such men as the Wrights, Curtiss and Dr. Langley gained their reputations and knowledge of aircraft through the building of models. Where it has taken them, so can it take the younger generation of today. Now is the time to learn through building and those who do it today will reap its rewards tomorrow.



My Greatest Thrill

A Noted Flyer Takes His First Parachute Jump and Becomes a Member of the Famous Caterpillar Club

By CATERPILLAR MINUS

MAJOR THOMAS G. LANPHIER, formerly commanding officer of the 1st Pursuit Group of the United States Army Air Corps, at Selfridge Field, Mt. Clemens, Mich., who resigned in the last year from the service to join his friend, Colonel Charles A. Lindbergh, in commercial aviation, after a brilliant career in military flying, knows what it means to become a member of the "Caterpillar Club" of one's own volition.

The Caterpillars, in case you have not joined the society and are not familiar with it, consists of pilots who have made leaps into space with parachutes from airplanes in flight.

If the only chance a flyer has for his life is to use his 'chute, as for instance from a burning plane, it perhaps does not require great urging to become inducted into the fairly exclusive Caterpillar organization.

But very few pilots, excepting a small handful of flying sergeants or petty officers in the army and navy, and barnstorming exhibition flyers, practice voluntarily this ungentle art.

Even at exhibitions in flying circuses given for the benefit of army and navy charities, such as have been seen at Mitchell Field on various occasions, it is not pleasant to watch the faces of men as they drop off wings. It takes every last ounce of nerve a man has to leap voluntarily with a 'chute from a plane.

If you doubt this, try it.

When he was C. O. at Mitchell Field some years ago, in the days when army 'chutes were not quite so dependable as they are today, Major Lanphier reached the conclusion that since these escape devices were intended for use in an emergency, a flying officer ought to practice using one when no emergency existed.

It was his sincere and conscientious belief, too, that he should set his own men a good example in this respect. He felt he ought to recommend to his fellow pilots that each make at least one drop, but he knew, too, it would be illogical and unfair to suggest such a thing unless he had voluntarily performed the feat himself.

One evening as the writer sat with Major Lanphier before the roaring fireplace in his quarters on the frigid banks of Lake St. Clair at Selfridge Field, swapping flying yarns, the officer told the story of his first parachute jump.

"The thought of deliberately taking a chance on the stunt preyed on my mind," Tom said, "I knew I ought to do it, but somehow I dreaded it out of all proportion to the actual risk involved. While many a poor fellow's 'chute has failed to open at the critical time and he has gone hurtling to an agonized death—for you know a man is perfectly conscious until he strikes the ground—the fact is that the percentage of deaths from this cause, in proportion to the number of safe jumps, is very low.

"I buoyed myself up with the thought that lots of safe descents had been made from high ceilings, and the

higher the better perhaps, but when it came to going up in a dual-control ship with some one else and deliberately diving off, for a long time my nerve just naturally refused to click.

"I'm willing to confess now that I took a flying sergeant up with me more than a half dozen times without letting him know in advance what was in my mind, but when the crucial moment came for me to do my stuff, old man Safety First just naturally balked. In plain words, I didn't have the nerve.

"I knew of an aeronautical engineer in Detroit, a little sawed-off chap employed by the Aircraft Development Corporation, who during the World War was a lighter-than-air man on the western front. He had determined, like myself, to make a parachute jump from a blimp some day, but he was like myself—he lacked the nerve.

"Finally he decided that he would force himself to jump by an expedient. With his parachute in place on his back he went up, crawled out and hung by his fingers from a ledge suspended over a mile of thin air. Knowing in advance he would never in the world have the courage to release his hold, he instructed a mechanic with him, to hit him over the knuckles with a hammer until he was forced to let go.

"The mechanic faithfully carried out his orders, you can bet, and the engineer made his drop all right, making notes on the time and his sensations on a pad of paper on the way down. He made the drop for a scientific purpose and got what he went after.

IT has always seemed to me that the greatest heroes are those who are intelligently afraid to do a certain thing, but who go ahead just the same and do it anyhow, fear or no fear. The man who isn't afraid to do what his fellows consider a nervy thing is really no moral hero.

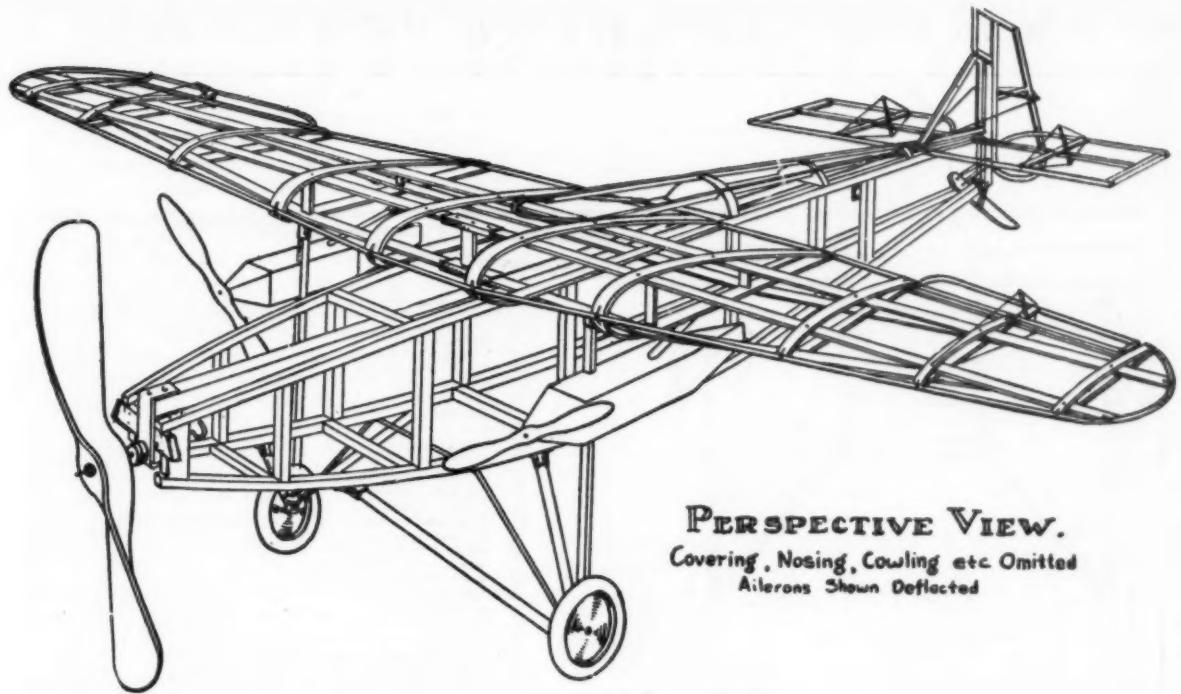
"I came to the conclusion that if that little runt of an engineer could muster the sand to make a drop by such a device, I, supposed to be a regular honest-to-Gawd flyer for Uncle Sam, could dive out of a moving airplane, and that I would, so help me, if it killed me."

"How did you get away with it, Tom?" I asked. "Did you have somebody throw you out?"

"Not exactly that," Major Lanphier responded with a smile of recollection. "You know I'm not altogether a fatalist. I'm rather religious in my own way and go to church pretty regularly. I made my leap on a Sunday, taking a flying sergeant up with me. First I went to church and said my prayers.

"Then I went back to the field and announced to the sergeant, before I went up, that I intended to make a parachute fall. That was for the sake of the psychological effect on myself. I couldn't afford to back down after I had told an enlisted man of my intention. I knew, too, it would go by grapevine all over the air station that I was going to jump and that a lot of eyes would be on me.

(Continued on page 45)



How to Build a Tri-Motor Ford Monoplane Model

**Here Is a Three-foot Scale Flying Model of the
"Floyd Bennett" which Commander Byrd Took with Him on
His Great Adventure into the Unknown Antarctic
Complete Instructions, Diagrams and Full Scale Assembling
Layouts are Contained in This Article**

THIS model is a scale reduction, 1/25 full size of the famous monoplane that accompanied Commander Byrd on his expedition to the South Pole.

It will rise from the ground and fly by its own power, provided it is constructed strictly in accordance with these drawings and directions.

As this model is made with the same kinds of material, with the same parts, and, on a small scale, in the same manner as the large airplane, the constructor will receive an excellent general idea of modern airplane construction that will be highly educational, and that can be obtained in no other way.

HOW TO BUILD

Become familiar with drawings, before starting to build.

Follow directions step by step as you work along, as nothing is gained by reading in advance.

Always drill holes before driving in nails.

Forming of Parts

First boil water in a kettle or large pan.

Cut pieces of wood or reed, as follows:

†2 pieces of 5/32" Square Wood 24-3/8" long for Fuselage.

†2 pieces of 5/32" Square Wood 24" long for Fuselage.

1 piece of 3/32" Reed 11" long for Fuselage roof.

†4 pieces of 1/8" x 1/4" Wood 16" long for Main Wing.

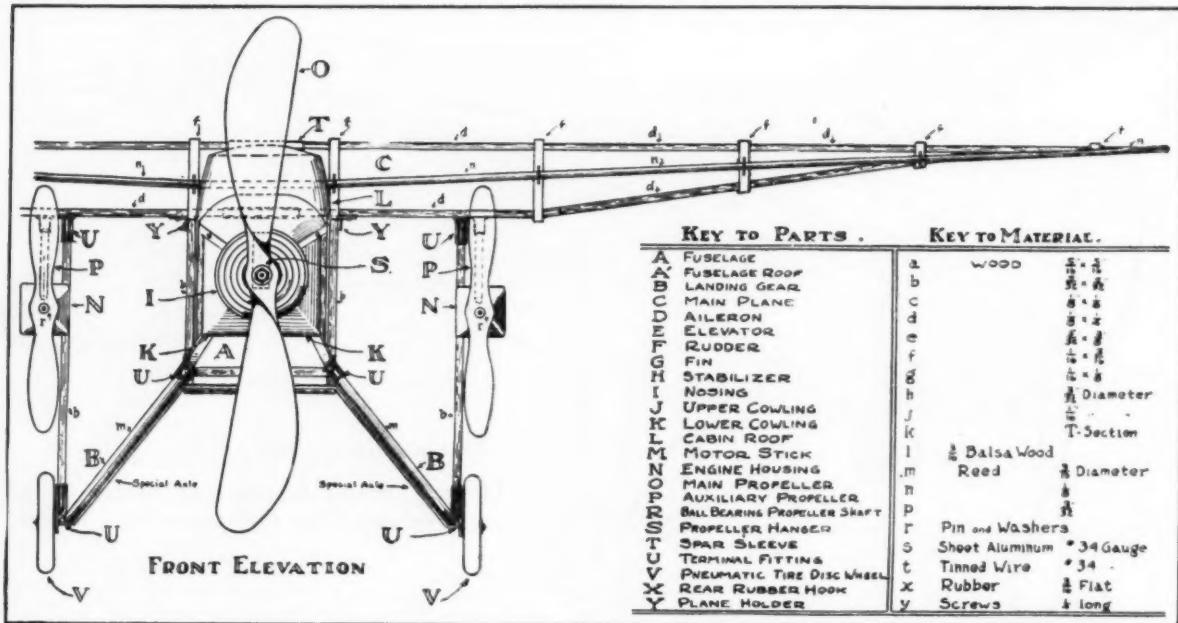
1 piece of 1/8" Reed 46" long for Main Wing.

2 pieces of 3/16" Reed 9 1/2" long for Landing Gear.

†2 pieces of 1/8" Reed 8" long for Ailerons.

1 piece of 3/32" Reed 8" long for Rudder.

2 pieces of 3/32" Reed 6 1/2" long for Elevators.



†These pieces need only have about one-half their length submerged in the water.

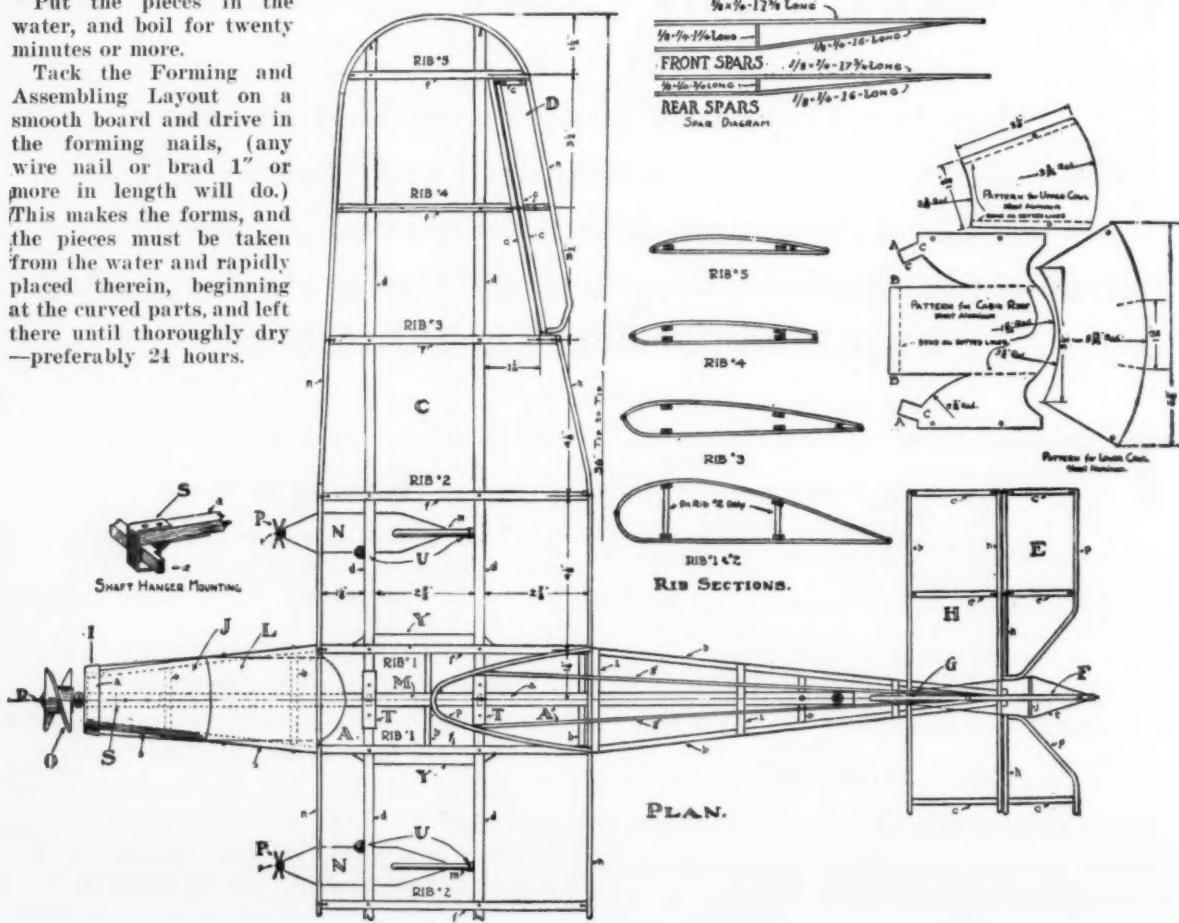
The wood pieces must be boiled at least twenty minutes and be placed into the form carefully to avoid splitting.

Put the pieces in the water, and boil for twenty minutes or more.

Tack the Forming and Assembling Layout on a smooth board and drive in the forming nails, (any wire nail or brad 1" or more in length will do.) This makes the forms, and the pieces must be taken from the water and rapidly placed therein, beginning at the curved parts, and left there until thoroughly dry —preferably 24 hours.

Fuselage

First nail and glue the longerons (the long bars) to the vertical cross pieces and nose struts. Use $\frac{1}{2}$ "



Model nails and plenty of glue, but be sure to drill $1/32$ " holes through the longerons before driving in the nails. Trim the ends of the cross pieces to match the curvature of the longerons, where necessary.

Then nail together the two sides thus formed by means of the horizontal cross pieces, the sizes of which are given on fuselage framework diagram and on the layout. Be careful to get the cross pieces at the points indicated.

Note that the back edge of each horizontal cross piece is on line with the front edge of the corresponding vertical cross piece, so that the nails pass each other.

JOIN the "T" Section to the rear of the fuselage with the flat part of the "T" Section rising above the fuselage. Trim the inner sides of the longerons to be flush thereon, drill a hole through each pair and through the "T" Section, drive a $1/2$ " nail through each hole and finally wire together the top longerons and the bottom longerons respectively, using plenty of glue.

Wire the tail skid against the "T" Section through the two holes in the skid as shown. Wire this twice around.

To the $5/16" \times 5/16" \times 1\frac{3}{4}$ " cross piece, fit, glue and nail the 20" motor stick keeping it flush with the front and square with the cross piece. Slip on the aluminum propeller hanger tight against the end of the stick, and fasten with screws. About $\frac{3}{8}$ " from the other end of the motor stick drill a $1/16$ " diameter hole and fasten therein the rear rubber hook. Hook the ball bearing propeller shaft into the hanger by passing the end of the hook through the holes first and then working the shaft around until the brass bearing goes through to its final position.

To attach rubber motor, hook one end of the skein on the propeller shaft and the other to the hook on the motor stick. To prevent the rubber from wearing away quicker than usual, it is best to stick a piece of adhesive tape to the hooks on both the propellers, shaft hook and the rear rubber hook.

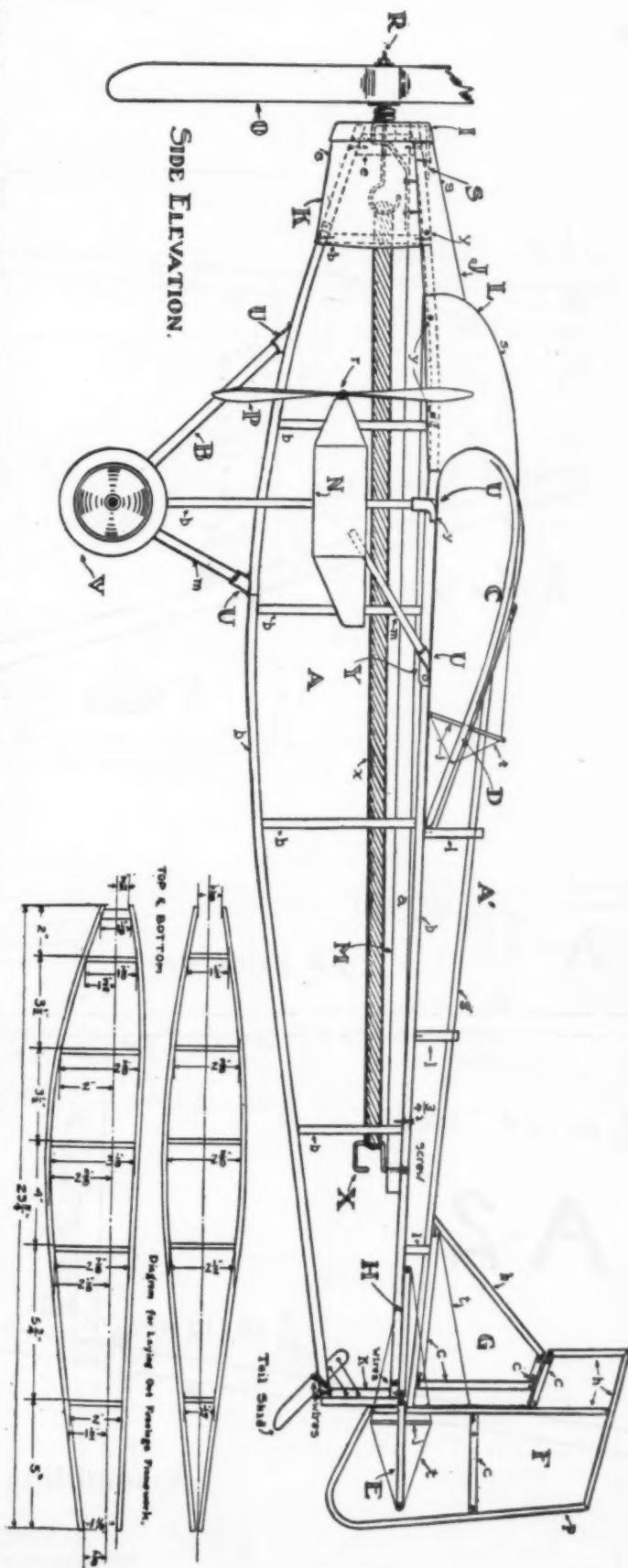
Place the motor stick in position in the fuselage, the $5/16" \times 5/16$ " cross piece against the $5/32" \times 3\frac{1}{8}$ " vertical piece and up snug against the longerons. Glue and nail in position and fasten the rear end of the fuselage cross piece with a $\frac{3}{8}$ " screw.

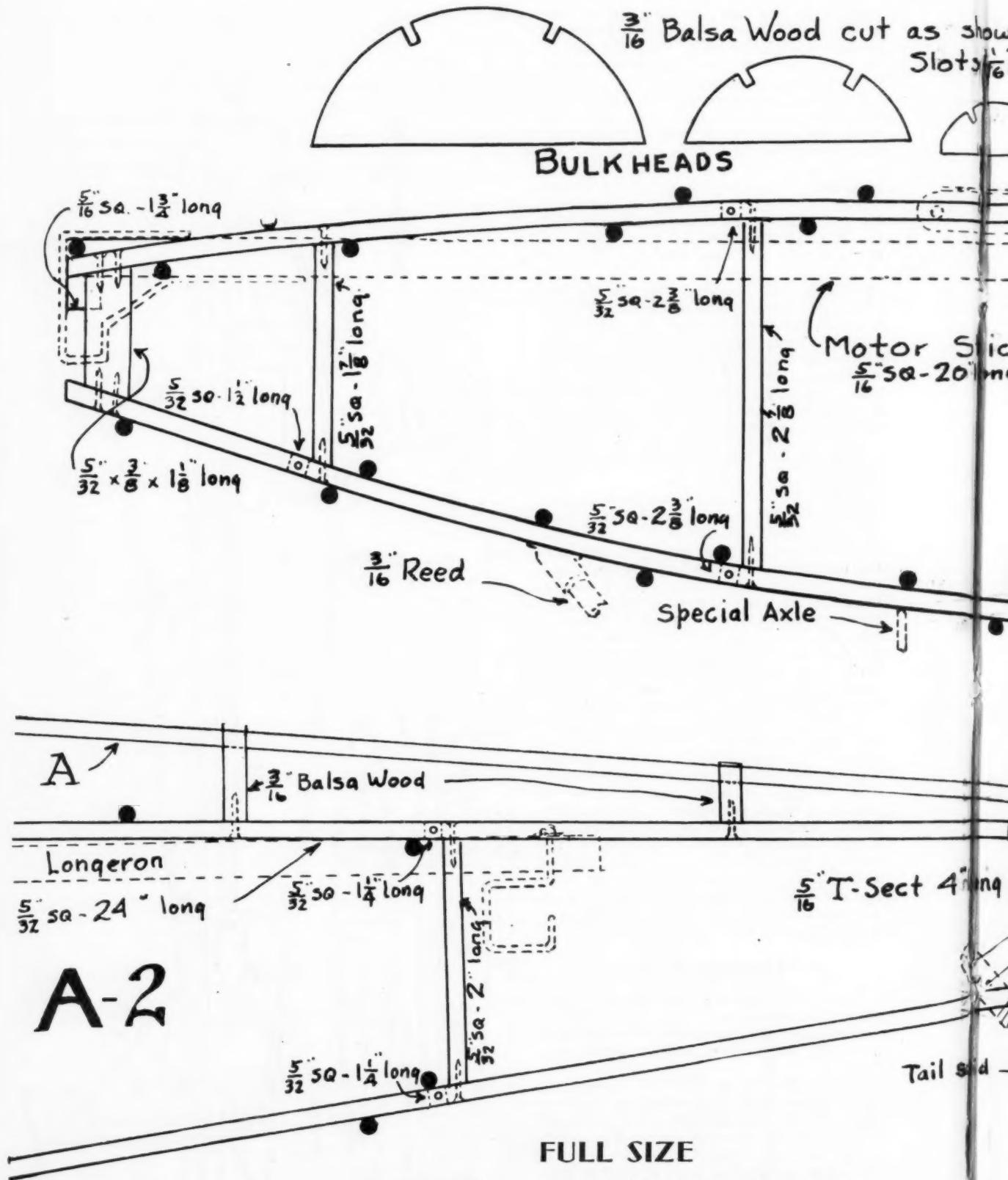
Fuselage Roof

Make three bulkheads from the $3/16$ " Balsa wood according to the diagram on the layout and notch as illustrated. Cut this wood carefully with a sharp knife to avoid splitting.

Place a length of $1/16" \times \frac{1}{8}$ " Spruce 14" long in each of the two notches on the three bulkheads, making sure that the bulkheads are the correct distance apart. Use plenty of glue in each notch. Let the two pieces of Spruce project $3\frac{1}{4}$ " in front of the first bulkhead.

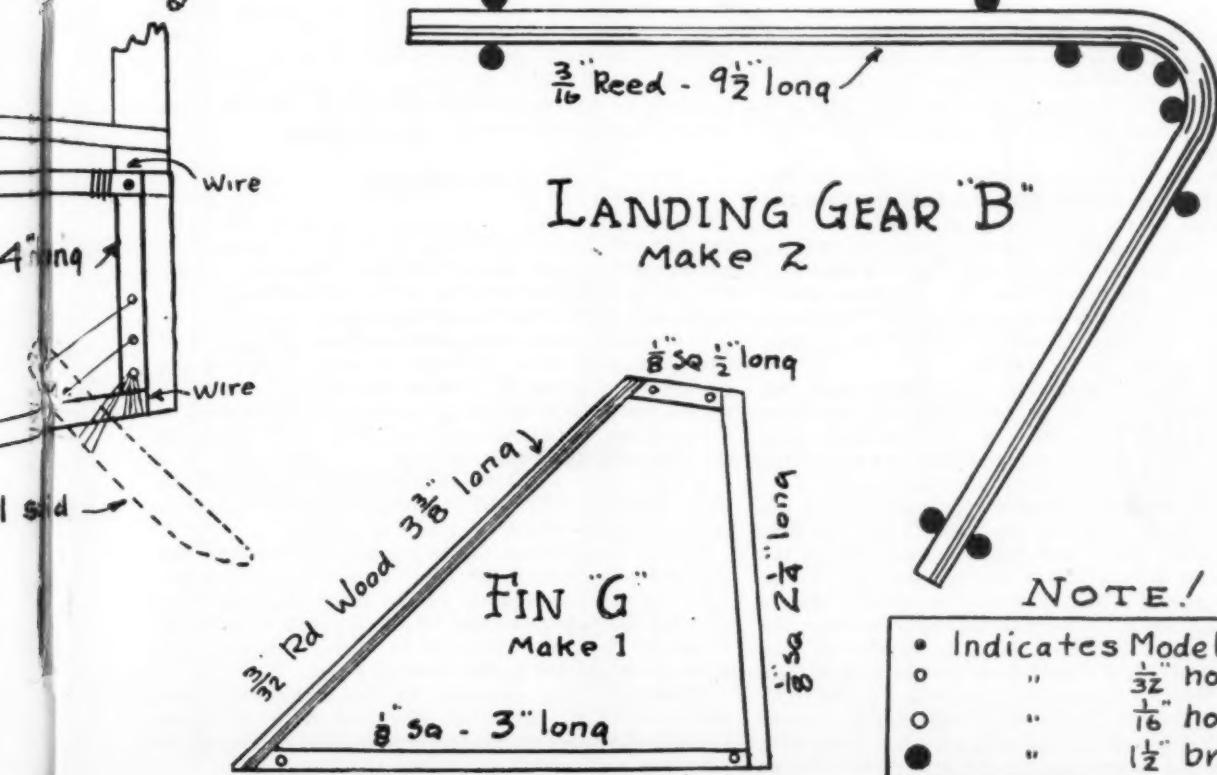
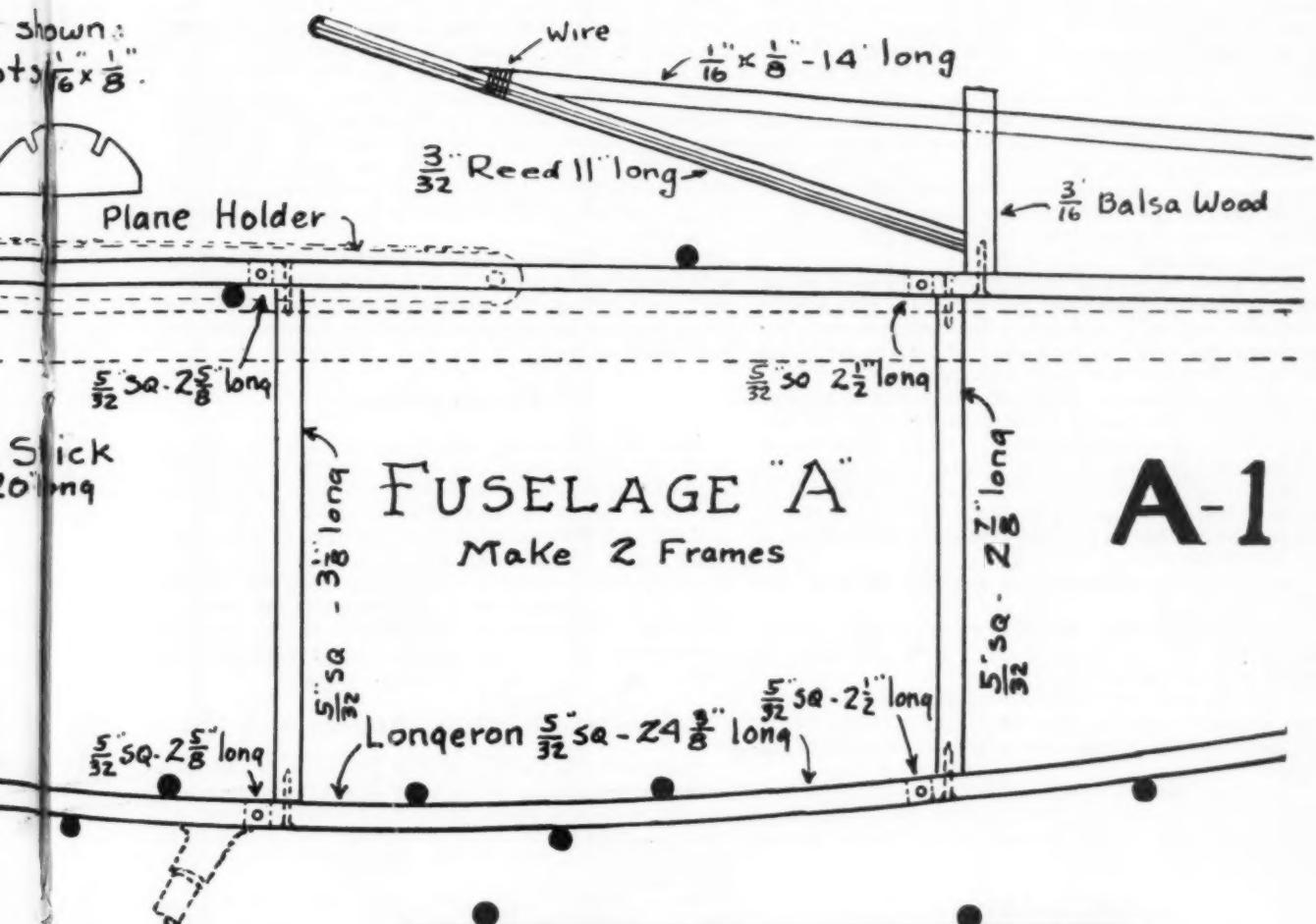
Fasten the formed $3/32$ " reed, which should be 11" long, to the largest bulkhead as shown. Drill a $1/32$ " hole in the reed and Balsa wood, then wire and glue ends of reed in





**FULL SIZE
Assembling and Working Layouts**

The Diagrams on these Pages are Full Size
Working Plans for the Tri-Motor Ford Monoplane



- NOTE!**
- Indicates Model Nail.
 - " $\frac{1}{32}$ hole.
 - " $\frac{1}{16}$ hole.
 - " $1\frac{1}{2}$ brad.

place. The two projecting ends of Spruce should touch the reed. Secure these two ends by drilling a $1/32$ " hole in each and by passing wire through them and around the reed, using plenty of glue. Do not fasten the two rear projecting ends of Spruce in any way.

Then attach the fuselage roof to the fuselage making the connections where the bulkheads rest on the upper longerons, as shown, using nails and glue. The two rear projecting ends of Spruce should fit snugly on either side of the rudder post, leaving an open space between them and the upper longerons. This space is for the stabilizer.

Now cover the whole fuselage with bamboo paper, leaving uncovered the front panels on the top, bottom, two sides, and the last panel on the bottom directly underneath the rear rubber hook. Also leave uncovered the space left open for the stabilizer.

Drill $1/16$ " holes in aluminum cowlings and bend as indicated on the layout. (The front part of the bottom cowl should form a circle). Screw the nosing in place, first trimming the $5/16$ " cross piece to match the curvature of the nosing ($1/16$ " holes should be drilled through the side of nosing for fastening to cross piece). Slide the cowlings in position into the nosing as far in as they will go.

See that screw holes of both cowlings are on a line with each other.

Finally screw the wing holders to the upper longerons in the exact position shown. (Drill $1/32$ " holes in wood to avoid splitting).

Hold the ball bearing shaft at the hook. Screw on the propeller until it rests tightly against the flange. Be sure that the curved edge of the propeller faces forward.

Now pull out the shaft as far as it will go, drill a $1/32$ " hole into the propeller through one of the flange holes and press a nail therein. Then replace washer and screw nut on tightly.

Main Wing

The main wing is made up of two halves. These halves are joined together by the aluminum spar sleeves before the reed outline pieces are fastened on. Therefore, be sure to make one half *right* and the other half *left* and to fasten the ribs so that the spars will all be the same distance apart.

Start with the upper spar strip $17\frac{3}{8}$ " long for the front and $17\frac{3}{4}$ " long for the rear and mark on them the crossing points of the ribs. Glue and nail an upper rib strip at each of these points but drive the nails in ribs No. 2 only a little way through. Also fasten bottom ribs No. 5 to the underside of the two upper spars.

Do likewise on the lower spar strips (16" long) using, of course, the lower rib strips. Clip off the projecting nail ends (ribs Nos. 1, 3 and 4).

Then bevel the ends of the lower spar strips that rest against the upper spar strips, as shown and join them together with nails and glue. Be sure the inner ends of the spar strips all line up, and that the rib strips have been cut back to the points shown.

Next place vertical uprights ($1/8$ " x $1/4$ " pieces) between the spar strips at ribs No. 2 (bevel the ends first to make a good joint) and fasten by driving in the nails that have been left part way in. Join the halves together by means of the spar sleeves. Fasten sleeves to spars with nails. Then nail uprights between the spar strips in the center of the wing as shown. The front upper spar strip should form a straight line from tip to tip. True up wing and set aside to let glue dry.

Put the $1/8$ " square pieces that support the ailerons in place and glue and nail between ribs Nos. 3, 4 and 5.

Now trim the outer ends of the spars and ribs as

shown on the layout; drill $1/32$ " holes at the ends (not too close) and then wire the $1/8$ " reed entering the trailing edges in place, adding a little glue also.

First cover the under side of the wing with bamboo paper. Cut the paper roughly to size. Apply glue to the under side of ribs and reed outline and work paper smoothly thereon. Then trim off evenly $1/8$ " all around, apply glue and work neatly over the reed outline. On the upper side glue to the outline pieces only and work the ends of the paper neatly underneath, after trimming as before.

Coat the paper with bamboo varnish ("dope"). This will loosen the paper when first applied, but when dry will draw it taut. To prevent warping, hold down the edges of the wing with small weights on the table for four hours or more.

Landing Gear

Trim the ends of the formed pieces of $3/16$ " reed so that both pieces are exactly alike. Attach the terminal fittings and turn them so that they will lie flat against the under side of the longerons on each side. Drive in a small nail through holes in the fittings to hold them tight, screw to the lower longerons in position shown in side elevation and layout. Then wire the special axle to the longerons and to the bottom of the curve of the $3/16$ " reed members. This completed gear must be symmetrical and the axle must be square with the fuselage.

Ailerons, Elevators, Rudder and Fin

These are all made generally in the same manner. Wire the $1/8$ " square ribs to the $3/32$ " round wood pieces on the elevators, rudder and fin, and wire to the $1/8$ " square pieces on the ailerons through holes drilled in the ribs. Then wire on the reed outline pieces, glue and hang up to dry.

Cover all these surfaces on both sides with bamboo paper. Dope with bamboo varnish and weight down. This is in order to have these units perfectly straight; otherwise, they will warp into a bad curve that is easily noticed. Next drill $1/16$ " holes and insert the $1/16$ " diameter wood levers so that they project equally from both sides of ailerons, elevators and rudder.

Assembling

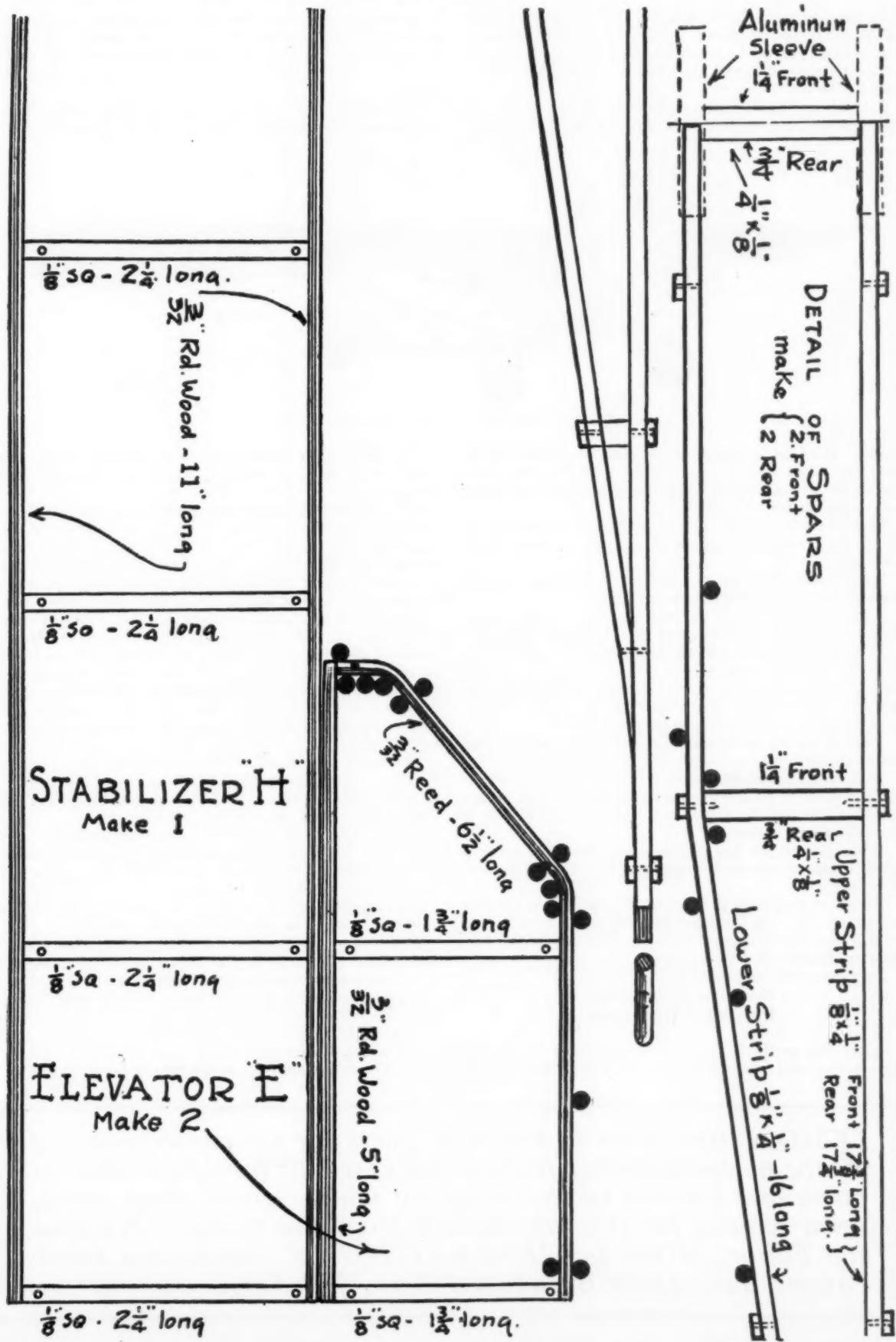
Hinge (with wire) the ailerons to the main wing and the elevators to the stabilizer. Wire fin to rudder post gluing front to third Balsa bulkhead. Taper top of rudder post to be in line with top of fin. Next wire the completed tail unit to the upper longerons.

Brace the fin with wire, starting from the upper end and passing, in order, through an outer stabilizer rib, the lower end of the "T" Section, the other outer stabilizer rib and back to the starting point where the ends of the wire can be twisted together. Drill $1/32$ " holes for the wire, through these members.

Hinge rudder in place, through $1/32$ " holes in both these members, the rudder covering being pierced to pass the wire around the $3/32$ " reed.

To wire the ailerons, fasten one end of the wire about the reed piece behind the $1/16$ " lever; then give a few tight turns about the tip of the lever, pass the wire through the paper in front of the forward spar, bring it back to the lower aileron lever, then to the rear edge where it is twisted to the starting piece.

When attaching elevators to the stabilizer, fasten only one at first. Slide the other end of the stabilizer through the space on the fuselage in front of the rudder post, and then attach the second elevator.



In the elevators, the wire is led through holes drilled in the rib of the stabilizer, then back again underneath and around the reed outline of the elevator. Likewise with the rudder, except that the wire runs through a hole in the fin.

To fasten wing to fuselage, hold wing in position on fuselage and lay both upside down with wing under-

neath. Hold wing absolutely square with fuselage so that the holes in the wing holder come on line with the center of each spar. Mark these holes on the wing, drill $1/32$ " holes and screw in place.

is absolutely essential that the wing be not warped or twisted in any manner, otherwise the model will not fly properly. See that the rudder is straight, and that the elevators and ailerons are not deflected for the first flights.

Test out the model before winding. Take hold of the rudder and lift until tail skid clears the ground. Then



neath. Hold wing absolutely square with fuselage so that the holes in the wing holder come on line with the center of each spar. Mark these holes on the wing, drill $1/32$ " holes and screw in place.

To make cabin roof, cut the aluminum as shown on the layout, bending tongues A inward to form right angles.

Then insert these tongues in Fold B, pressing the latter tightly to keep the tongues in place.

Finally screw the cabin roof in place to the upper longerons snugly against front of plane and cowling.

Place the proper terminal fitting at each end of the $5/32$ " x $5/32$ " x $5\frac{1}{2}$ " long pieces. One fitting goes on the axle and is fastened by wire to it. The other fits snugly up against the lower front spar of the wing. Secure these fitting with nails and screw in place.

Finally mount the wheels so they run smoothly and screw on the nuts.

Glue one of the short pieces of $3/16$ " reed into the hole drilled in each of the engine housings. Attach a terminal fitting at the upper end. Screw this fitting to the lower rear spar.

Press the engine housing against the $5/32$ " vertical piece to fit snugly in the groove. Cut in the former. Use glue.

Finally mount each of the two 5" auxiliary propellers on a long pin with a washer on each side and fasten to engine housings at the front, by pressing in the pin. The propellers must turn easily.

This completes the model.

Flying Directions

After the model is completely assembled, eye it up, to see that the wing is square with the fuselage. It

give a good push forward and, if correctly built, the model will run along straight and make a short hop off the ground.

After the model is adjusted, hold it firmly at the fuselage and give the propeller 70 turns, clockwise (to the right on top), as you face it. Next set it down on a smooth runway, keeping hold of the propeller with one hand and holding the rudder with the other hand. Face the direction toward which the wind is blowing.

Raise the rear enough to keep the skid off the ground, release the propeller, give the model a very gentle thrust forward, then let go, and it will taxi along the ground by its own power, and will make a short flight, then, if you have found that the model is properly adjusted, and its course was in a straight line, give the propeller 140 turns (the full amount), launch as above, and it will fly 70 to 100 feet.

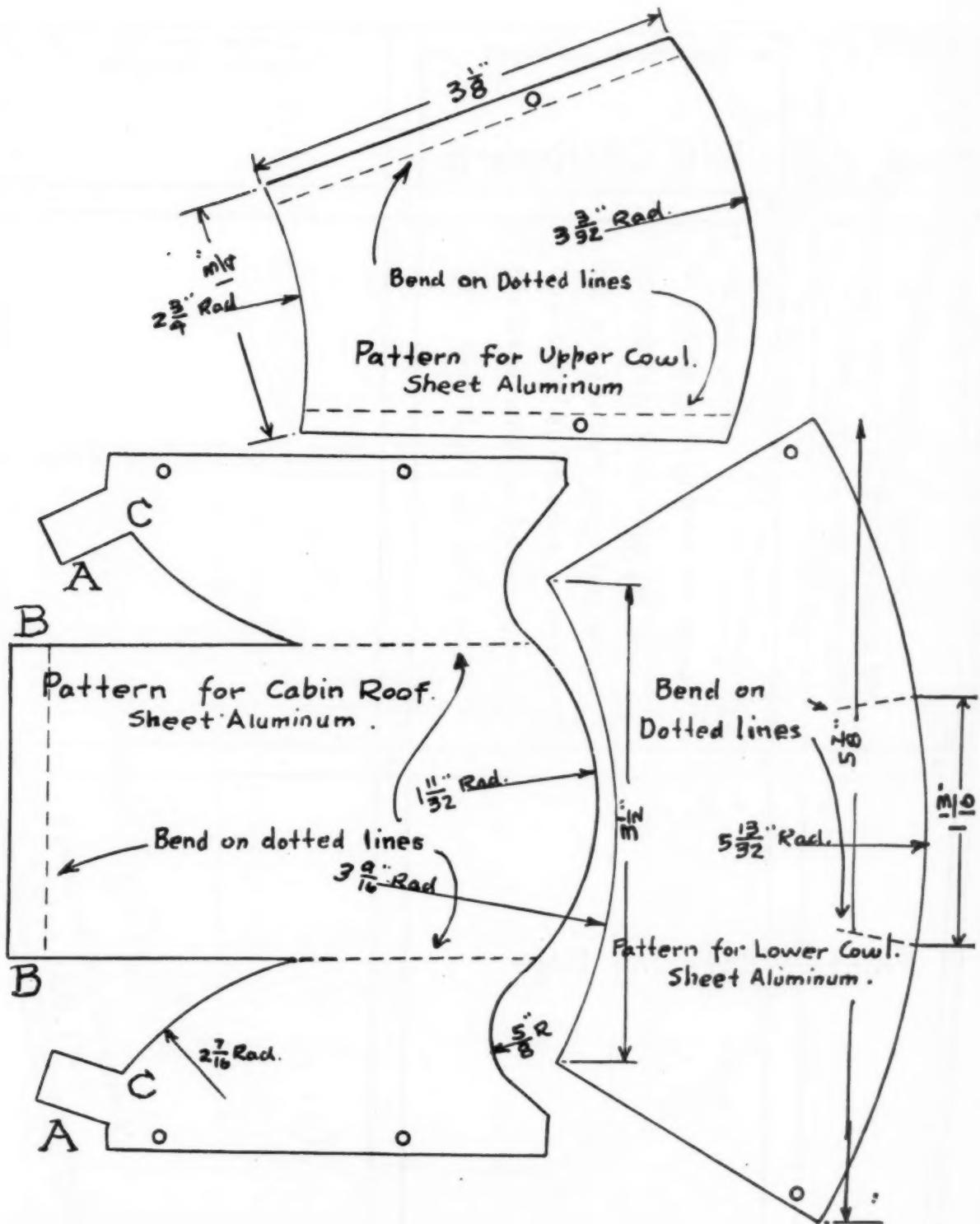
The model is controlled fore and aft by means of the elevators which, being hinged, can be swung to any position. If the model dives, the elevators must be raised; if the model shoots up sharply, the elevators must be lowered; if the model turns and slips sideways, the wing is warped and must be trued up, or compensated for by lowering the aileron on the low side. The rudder is used for steering just as in a boat.

Choose calm, clear weather, a clear space, and a smooth runway for flights.

The rubber must be carefully handled and not wound too tightly, otherwise it will break. If a break should occur, tie together again with a square knot, trim down the projecting ends, and the skein will be good again. Give the rubber sufficient rest after about ten windings, to regain its elasticity. It is always advisable to have an extra set of rubber on hand.

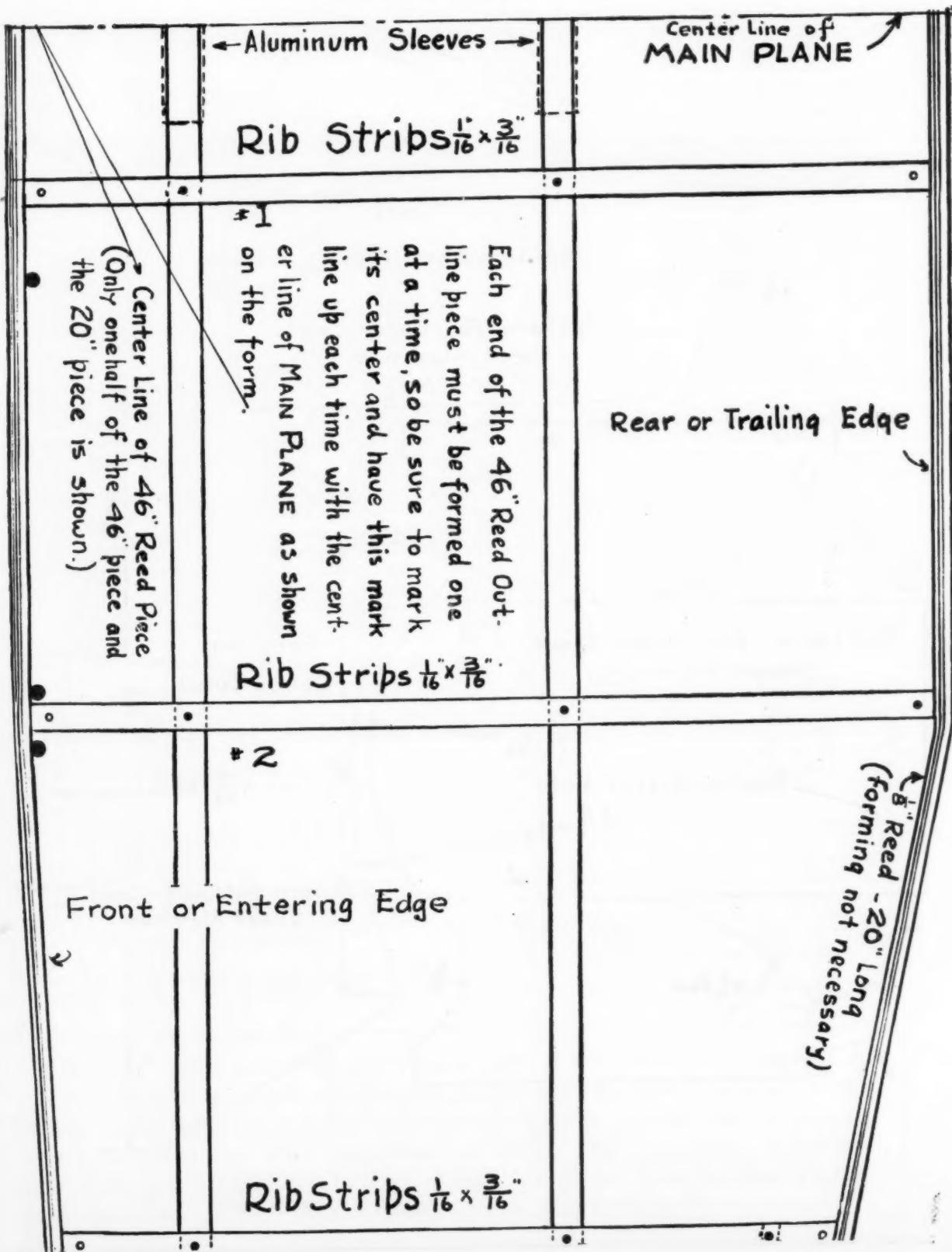
Turn to full scale form and working drawing.

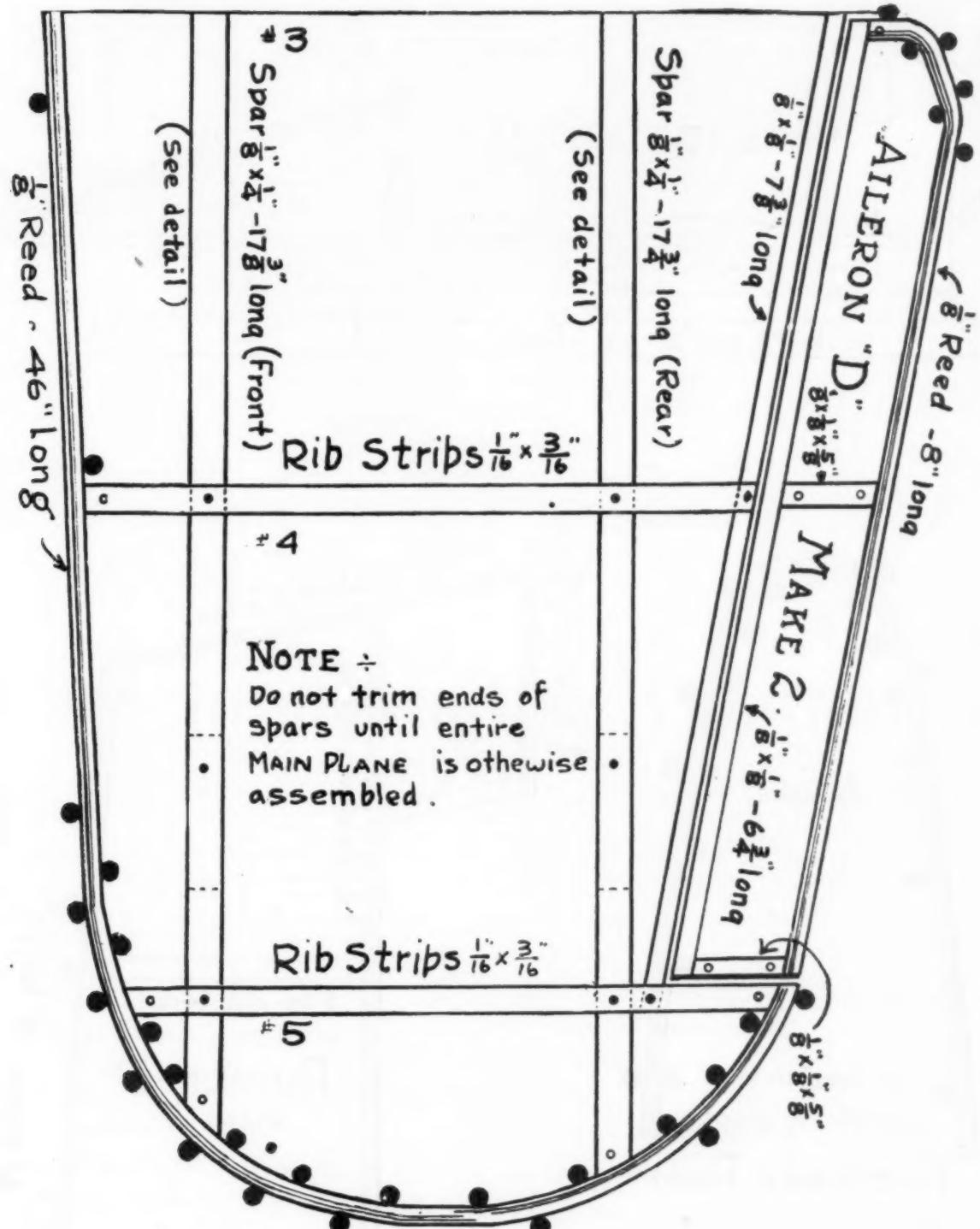
THOSE who wish to purchase parts for the construction of the model described in these pages will be furnished with the name and address of the company which stocks these parts, upon request for this information from the reader. Address the Editor, MODEL AIRPLANE NEWS, Macfadden Publications, Inc., 1926 Broadway, New York City.

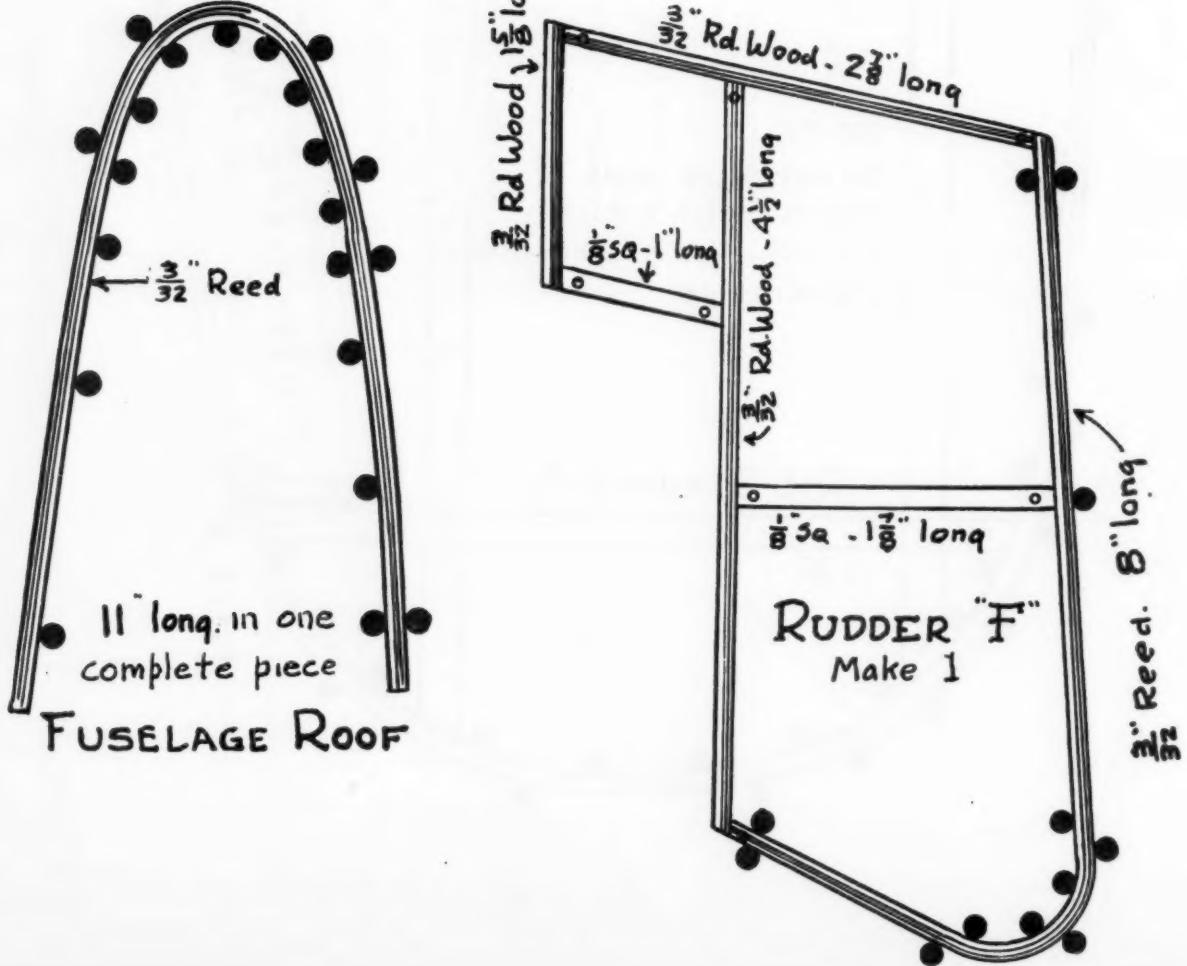
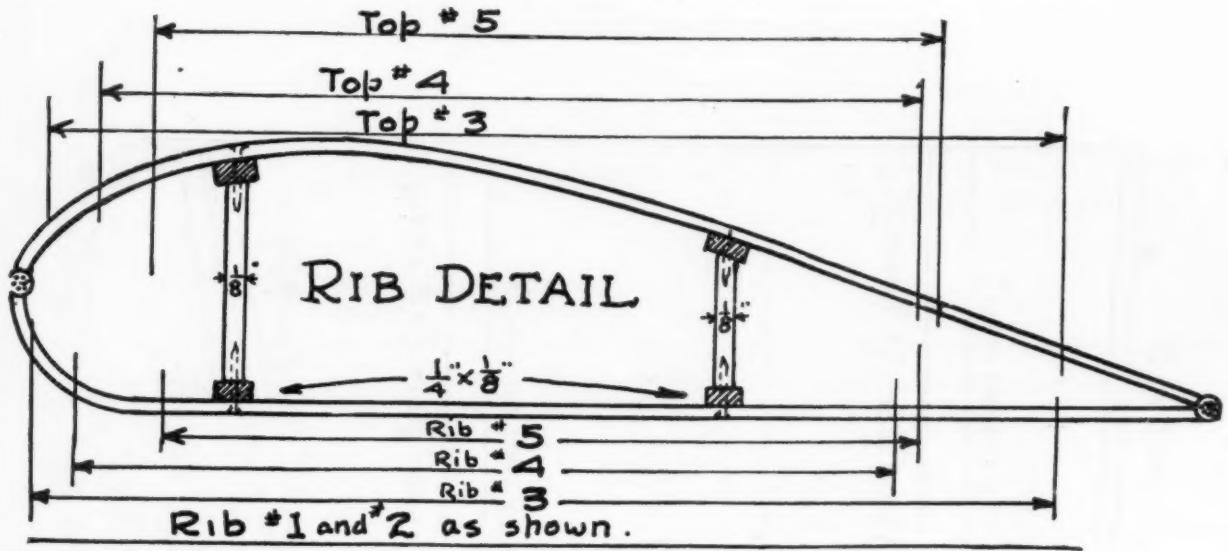


MAIN PLANE "C"

Make one Right
Make one Left









Win a
Model of this
Plane

Write a Letter
and
Win a Prize

WHY

I Am Interested in Aviation

MODEL AIRPLANE NEWS wants to know why you are interested in aviation and to find out we are going to give away three wonderful prizes to the ones who write us the three best letters telling us their reasons.

All you have to do is to write us a letter telling why you are interested in aviation and if your letter is judged by the Editor of MODEL AIRPLANE NEWS as one of the three best, you will receive one of the following prizes:

FIRST PRIZE

**A three foot Flying Model of an
Amphibian Plane**

SECOND PRIZE

**A copy of the book "Building and
Flying Model Aircraft"**

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"Model Airplane News"**

The decision of the editor is to be final and the age limit is nineteen. Any boys or girls over that age are not eligible for this contest. Neatness and correct spelling will count, so watch your "Ps" and "Qs". Tell in your letter why you like aviation; which branch you care for most and give your reasons.

Address all letters to:

**The Editor,
MODEL AIRPLANE NEWS Contest,
Macfadden Publications,
1926 Broadway,
New York.**

In the October issue the winners will be announced and the prizes will be shipped to them. If possible we will print the pictures of the winners with the letters which won the prizes.

So go to it! Every boy or girl, within the age limit, has a chance to win! Get your letters in early, so that the winners can be picked in time to be announced in the October issue. The contest closes on August 1, 1929, at midnight. Letters received by the Editor after that time cannot be considered, so mail your letters early!

Let's go!

THE MAN THEY

He Laughed and Defied the Royal Northwestern Mounted Police But Fate Stepped in and—

FRED ROBERTS never had a chance!

Even as his hands moved instinctively to obey the sharp command, "stick 'em up," a lead slug tore into his shoulder. He staggered back, feeling blindly for support, but as he sank to one knee, reaching for his gun, a gnarled and hairy hand yanked from his bulldog grip, the little black bag.

In broad daylight it happened.

The messenger of the Greymont Lumber Company had been held up, shot, and the monthly payroll spirited away into thin air even before the echo of the shot had died in the cold, crisp air.

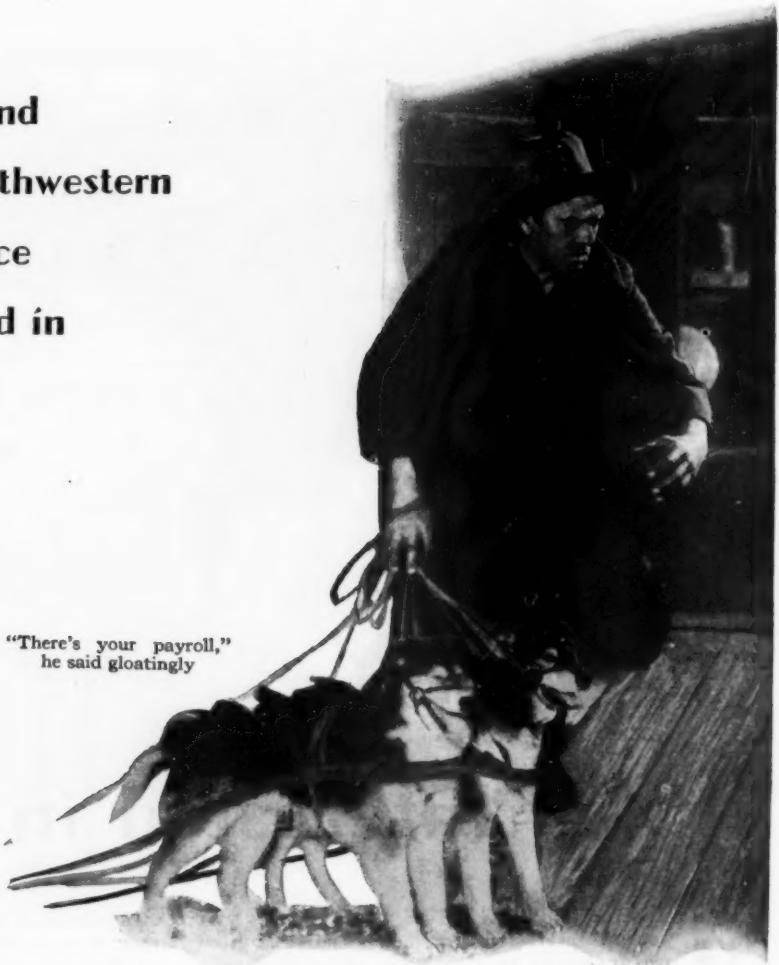
Later, from his hospital cot, Roberts told his story to Andy Tyler, his fellow pilot on the ranger patrol.

"You see, Andy," he said. "Arthurs, the regular messenger, was ill, so the Old Man asked me to go to the bank. There's never been any trouble here. The town's too small to expect a thing like a daylight hold-up, so I took no precautions. Passing the post office, two men approached me with a gun and demanded the money. At first, I thought they were joking, but," he gazed wistfully at his bandaged shoulder, "they weren't."

Thus it was that young Andy Tyler went out alone on the monthly forest patrol.

Below him lay an infinite white sheet, sprinkled lavishly by nature with careless handfuls of evergreen pines which reared their proud, vernal heads skyward, impervious to the hungry wolves and the icy blasts of winter. He breathed deeply. The air was like crisp old wine. This was living! The very atmosphere seemed to radiate cleanliness—immensity. Far to his

"There's your payroll," he said gloatingly



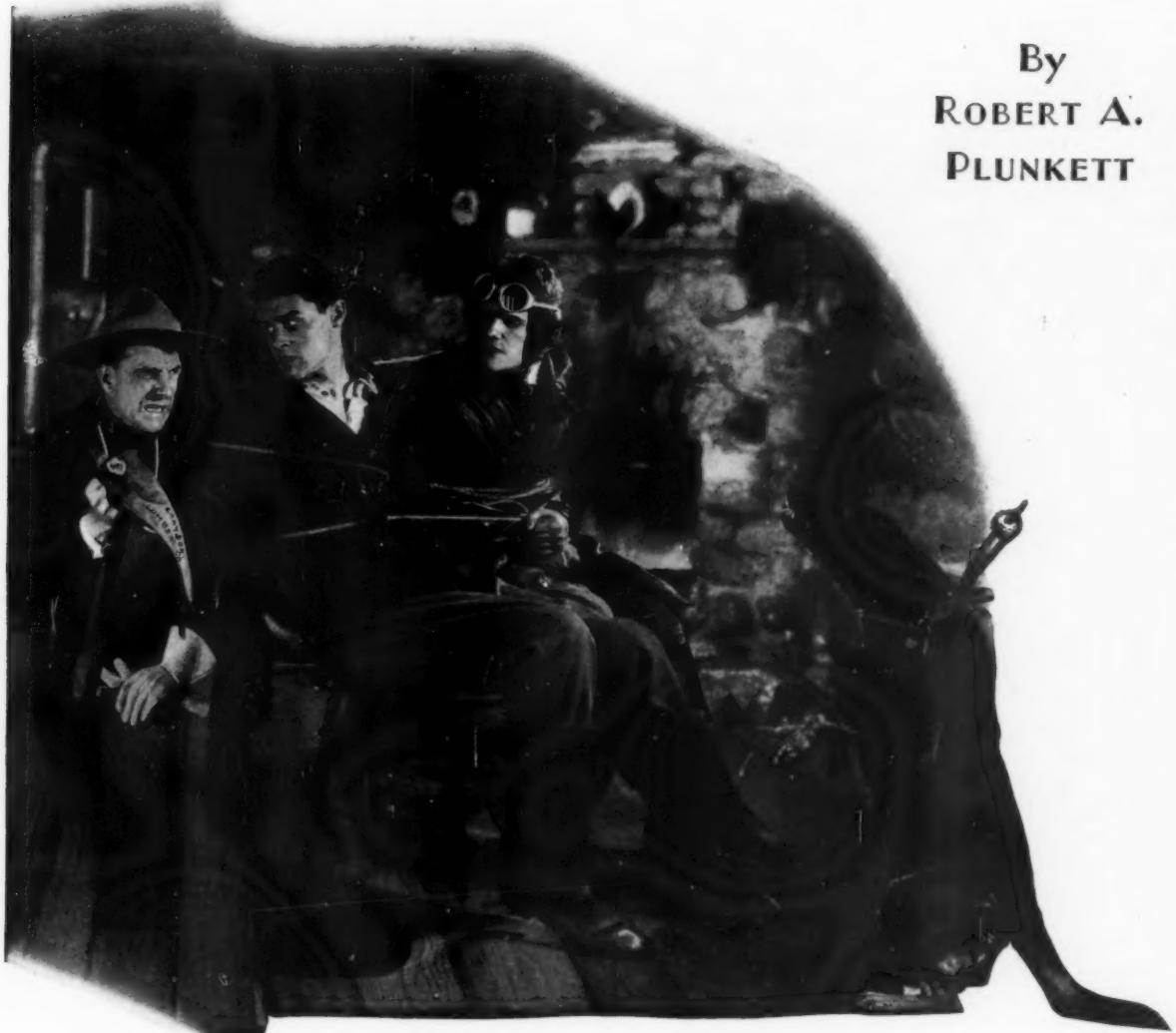
left, the towering mountain range cast a regal shadow over the forest, and the sweeping north wind flung a chill, singing breeze in his face, that seemed to sweep all pettiness from his soul and make him a part of this huge panorama.

Even the big Malenius, beside him in the cockpit, barked in sheer joy as the blood in him that was wolf responded to the silent call of the wilderness beneath.

THE propeller tore at the onrushing wind as though resenting its attempt to impede the pace of the speeding monoplane. The roar of the powerful engine was caught up by the distant hills and flung violently back in a devastating echo. Somehow, Andy Tyler found a fervent appreciation and joy of living that he had never known before.

Suddenly, his keen pilot's ear detected something wrong. The key of the engine's monotone had abruptly changed. Toby, too, seemed to sense disaster, as his staccato bark fought against the engine's roar and he looked at his master apprehensively. A casual obser-

DIDN'T GET



By
**ROBERT A.
PLUNKETT**

ver would have noticed nothing, but Andy Tyler knew that the pounding motor had missed a beat. Obeying the first law of flying, he first cast a swift glance over the cockpit's side in search of a suitable landing place. With relief, he saw a few hundred yards to his right an expanse of snow that was free of those gaunt, imperious pines. Pressing his rudder-bar, he headed toward it.

Then, and only then, did he investigate the trouble. A look at the gauge on his instrument-board assured him that his tanks still carried ample gasoline. By now, the engine was fuming and sputtering like an irascible old woman. It must be the feed line, he decided. Hastily, he reached down for the hand pump at his side. He jerked it frantically up and down. But no answering song of the dying engine smote his eager ears. It gave a weird, ghastly cough, then quit completely.

Despite the perilous situation which confronted him, he remained calm. His hand upon the stick was as steady as though he were about to land, with engine functioning perfectly, upon the Greymont Field. Both physical and mental hazards faced him: first, the danger of an immediate crash; and second, granting he landed her safely, should something serious be wrong, he confronted a long wait in this barren wilderness until help should come.

HE dropped her nose slightly to maintain his flying speed and continued on to the treeless snow tract. Again, he pushed the stick forward and dropped through the crackling air. Down, down he went, the indicator on his altimeter curving slowly toward the earth. Some few feet from the ground he flattened out precipitately and whirred straight along above the virgin waste, muttering a fervent prayer that she

would not crack up as she hit the hard, frozen floor. Toby whined and snuggled up against the pilot, as though he too, were conscious of their plight.

She jerked convulsively and dropped flat, losing her flying speed entirely. The impact as the runners smacked the icy, slippery snow, sent a quivering shock through his sturdy young frame. He listened intently for the splintering crack, which would indicate that his landing-gear had gone. But no sound came other than the slithering of his runners, as he glided along like a huge ice-boat.

It was a neat and lucky landing, and realizing it, he drew a brief sigh of relief, as the big gray monoplane taxied to a full stop almost in the center of the lonely Yukon plain.

HE climbed down from the cabin, the big husky following him with a joyous bark, as his paws felt the familiar ice beneath their weight. Both man and dog stretched their cramped muscles until they creaked. Then Toby, squatting on his haunches, sent a wild, atavistic whine into the forest and dashed crazily to and fro, now and then thrusting his nose into the dry snow in ecstasy.

Andy bent over and reached beneath the cockpit. His suspicions were immediately verified. His gas strainer was hopelessly clogged with sediment. Stretching forth his numbed fingers, he commenced to unscrew the offending accessory.

He hastily scrambled from under the plane and rose to his feet. Toby crouched some ten feet in front of him, his strong, white teeth bared, and snarled menacingly. Andy instinctively tore open his leather jerkin and reached for his gun. But the big service forty-five remained untouched. For, there, staggering across the snow, in the manner of a man sorely spent, reeled a tall, husky figure dressed in the familiar scarlet and gold uniform of the North Western Mounted Police. Like a crimson, drunken ghost from nowhere, the latter zigzagged heavily toward Andy. Toby tensed for the spring, his upper lip curling threateningly.

"Down, Toby," commanded Andy.

The dog turned reluctantly, met Andy's eyes, and trotted slowly back to the motionless plane.

Andy hastened to the policeman's side.

"What's wrong?" he asked, breathlessly.

The other stumbled in the snow, and stared at him with glassy eyes.

"I got him——" he gasped. And collapsed in Andy's arms.

Andy laid him gently in the white snow, and procured his blankets from the plane. Wrapping the policeman in the heavy, woolen sheets, he hastened to light a fire and make an improvised camp. Toby lay under the fuselage still snarling at the unconscious figure on the ground. Andy looked up from his labors and gazed sternly at the Malemiut.

"Quiet, Toby," he ordered.

The animal relaxed at the sound of his voice, but continued to glare malevolently at the huddled gray form.

The warm glow of the friendly fire aided by the appetizing smell of steaming coffee, caused the blanketed man to groan uneasily, and sit up.

Without a word, he drained the tin cup which Andy offered him. He put the utensil down beside him, stared at the fire and then at Andy.

"Got a smoke?" he asked abruptly.

Andy tendered him one in silence. The mountie took the proffered cigarette without deigning a reply. Cast-

ing aside the blankets, he thrust a brand into the fire and lighted up.

Andy studied him silently. He saw before him a tall, well built man of about thirty-five, with eyes set back far into his head and surrounded by dark, half-moon circles. His face was lean and wind bitten. Not particularly prepossessing, thought Andy, but nevertheless a man who could face hardship with fortitude.

Finally, the mountie spoke.

"Name's Simpson," he said. "Thanks for picking me up."

Andy waved the thanks aside.

"What's happened?" he inquired. "How did you happen up here alone? Where are your dogs? Where's your pack?"

The other seemed, for a moment, to resent this rapid questioning. A frown crossed his snow-scarred brow. At last, however, he forced a genial smile.

"One thing at a time, son," he replied. "One thing at a time. It's a long story."

Toby ran across in front of the fire, and squatted down next to Andy. As he passed Simpson, he showed his teeth once more. Simpson scowled at him.

"You'd better watch your dog, there, stranger," he said sharply.

"He's all right," replied Andy curtly, running his hand over the thick wool on Toby's back, and awaiting the other's story.

The man in uniform puffed deeply on the cigarette and blew a wisp of blue smoke toward the fire.

"Well," he began. "You're the lumber company ranger, aren't you?"

Andy nodded his affirmation of this statement.

"You know about the payroll holdup there, last month, don't you?"

Andy's eyes flashed, as he remembered the looting of Roberts.

"I ought to," he answered, "The other pilot was wounded."

The policeman shook his head gravely.

"The thugs are up here," he went on. "I was sent out after them. I nailed one of them some three miles back. He got the drop on me, but I gave him a stiff fight. However, he slugged me and got away with my dogs. I walked along trying to hit the trail, but failed, then you found me."

"It's lucky I did," said Andy. "You wouldn't have had a chance of getting out of here alone, and it would be another month before a plane came up again. We'll camp here tonight, and in the morning, after I finish the run, I'll take you back with me."

T seemed to Andy that an apprehensive light shone in the other's eyes.

"Why—er—er," he stammered. "I can't go back."

Andy looked at him in amazement.

"Why not?" he queried.

The other was at a loss for a moment, then he rallied. "The North Western Mounted Police always get their man," he quoted, like a school boy reciting a graduation piece.

"But, good heavens, man," expostulated Andy. "You can't stay here without supplies or dogs. I haven't any to leave you. You can return to Fort Hamilton, equip yourself and start out again."

The other shook his head.

"No," he said, "I can't go back."

Andy decided not to speak of the matter again until morning. Either the man was a little queer in his head

after the fight with the thug, or there was something suspicious about him. His story sounded rather fishy, and Andy noticed that despite the fact of his losing his dogs and food, his revolver still remained strapped at his side.

Finally, he rose.

"You stay here," he said to the other. "I'll rustle up some more wood."

The mountie nodded and relaxed once again on Andy's blankets.

Puzzled at the other's behavior, Andy wandered through the thick fir trees, cracking off pieces of dead underbrush to replenish the fire. It occurred to him for a moment, that Simpson might suspect him of being an accomplice of the robbers. But this thought he dismissed as absurd.

One glance at the big monoplane with the Greyson Company's name painted glaringly across the wings, should dispel any suspicion on that score.

A sudden, half-wolf snarl, drummed against his ears. In an instant, he had dropped the frozen twigs he was carrying, and dashed for the camp. He knew that growl too well. It was Toby's battle cry!

Andy regarded him coldly.

"What happened?" he asked.

"That cursed dog of yours," snarled the other. "Blast him, he might have killed me."

Before Andy could interfere, he aimed a savage kick, that landed squarely in the husky's ribs. In a trice, Toby was upon him. Andy shouted desperately and tugged with all his strength at the animal's collar. Again Toby, responding to the voice he loved, relinquished the attack. Simpson again rose to his feet, this time jerking at his belt for his gun. But before his fingers closed upon the handle, he found himself facing Andy's .45.

"Put that gun up, Simpson," barked Andy.

In his rage, the other hesitated a moment, as though he would make a fight of it, but the cold, unwavering muzzle of the .45 made him reconsider. Slowly he dropped his hand to his side.

"Listen," said Andy. "You sound funny to me. That dog wouldn't have touched you after my command to leave you alone, if you hadn't attacked him first. Tomorrow you're coming back in the plane with me. Hand



"I got my man," he gasped

He rushed into the clearing in the nick of time. There on the ground in front of the fire lay the mountie, his arm upraised to fend off the attack, while over him, teeth bared and the blood lust of his ancestors upon him, was Toby. Imperiously shouting the husky's name as he ran, Andy tore toward them. The Malemute looked up at his master and sullenly obeyed his gestured order.

The mountie came to his feet slowly, a string of curses issuing from his lips.

me your gun—butt first."

Their eyes met and clashed. Finally, Simpson's dropped as he complied with Andy's demand.

"You take half of the blankets and sleep over there," said Andy, indicating a spot by the fire.

Simpson glared at him a moment, yellow hate flashing from his sunken eyes. Then, in silence, he turned away and crawled into the warmth of the heavy blankets.

Andy sat gazing into the fire, a friendly arm flung

around the neck of the husky. For some moments he sat thus, pondering the peculiar conduct of his guest. Both his story and his manner were unusual. But still, there was that uniform, positively identifying him as belonging to the force of law and order.

He shot a puzzled glance at the huddled figure lying still in the dancing shadows of the firelight. Simpson appeared to have fallen into a deep sleep. An occasional bass snore sent into the ominous silence of the night was the only indication that he was alive.

THE grating crunch of a footfall in the snow came like a thunderclap through the stillness of the wilderness. Hearing it, Andy froze into immobility, and thrust his hand over the dog's open muzzle. Slowly, he attempted to edge away from the fire, dragging the dog with him. To turn and face the newcomer, might mean instant death if they were discovered.

Andy had wriggled into the outer fringe of the light when for the second time that day a strange voice smote his ears.

"Don't turn around, stranger. Throw your gun on the snow there."

Realizing he had no alternative Andy complied with the order. Toby growled a low ominous growl.

"Keep your dog still," the voice continued, "or I might have to shoot him, and I always did like animals."

Andy spoke in a soft tone to the tense husky, and rubbed his mittened hand over his back. A shadow came between the fire and Andy. In the flickering, deceptive light of the dying fire Andy saw a young blue-eyed giant about the same age as himself. A blue-barreled, grim Winchester was held firmly in his hands. The newcomer thrust back his parka.

"Who are you?" he asked.

Andy surveyed him keenly.

"The ranger for the Greyson Company," he replied. "And if it wouldn't be considered impolite, may I ask the same thing of you?"

The other grinned but didn't answer. Then, for the first time, he caught sight of the blanketed figure at his side.

"Who's that?" he asked abruptly.

Andy considered this question. Undoubtedly, he reasoned, something strange was going on. The ap-



"You'll tell 'em nothin' at all. Put 'em up, both of you," screamed Simpson

pearance of a stranger on top of the peculiar actions of the mountie who was now sleeping strongly attested to that fact. Furthermore, Simpson's mention of the holdup indicated he knew something about it. Which of these two men was on the level—if either—was a question that Andy was not prepared to answer. If the newcomer was one of the bandits, it would not do to give away the mountie. Andy made up his mind.

"That's my observer," he said. "He's turned in."

THE stranger turned toward the sleeping figure. Andy held his breath and muttered a silent prayer that he would not rouse him and notice his uniform. He breathed easier a second later when the giant with the Winchester once again gave his complete attention to the man and dog before him.



"Sit down," said the stranger tersely.

Andy again squatted on the snow, Toby nestling beneath his arm, as the intruder, making himself at home, flung more wood on the expiring embers.

"Where's your plane?" he asked suddenly.

ANDY indicated the gray hulk that was scarcely discernible against the ghostly, snowy background.

The other nodded and seated himself carefully between Andy and the black .45 which was lying uselessly on the ice. For a time he surveyed Andy in silence; when he did speak, his words were hardly what Andy expected.

"Nice dog you've got there," he remarked conversationally.

In spite of himself, Andy grinned.

"You've got a cast-iron nerve," he replied. "You stick a man up and instead of telling him why, you discuss his dog."

The other laughed a gay, boyish laugh.

"Well," he exclaimed. "You see, I like animals."

Andy instinctively liked the stranger sitting opposite him. It was hard to believe that the frank, boyish countenance which confronted him was that of a desperate criminal.

"Listen," said Andy impulsively. "What's all the mystery about? Who are you? Where's your team?"

THE other looked at him seriously as though he were considering the advisability of taking Andy into his confidence. Then he shook his head slowly.

"You'll know who I am in good time," he said abruptly. "Now you pack your blankets and go to bed. And don't try any tricks, because I sleep like a watch dog."

Angered that his questions were ignored, Andy curtly turned away and arranged his bed. As he crawled in between the blankets, Toby scurried away over the snow and took up his position under the monoplane's fuselage, a place in which he invariably kept the nightly vigil, when the plane was not in the hangar.

Andy's brain was hitting on all six as he lay in his improvised bed, blinking at the ebbing flames which the stranger had permitted to die down. But the more he tried to figure out what the meaning of the advent of these two men camped with him meant, the more baffled he became. True, there was something about the second fellow that inspired a confidence that was not engendered by the first arrival. But Andy knew life too well to be entirely swayed by appearances. Furthermore, there was always that baffling uniform which certainly should prove something.

He resolved that, despite the warning of the man with the Winchester, he would stay awake awaiting an opportunity for the turning of the tables on his captor. For captor he was, even though he had said nothing that would indicate he intended making a prisoner of the young pilot.

Andy lay in that nebulous condition which is not sleep nor complete consciousness. Twice he had fought off the overpowering drowsiness which attacks most swiftly the tired, healthy body. Twice he had stemmed the stupor which came over him, but, at last, it proved too strong for him, and not even being aware of the fact, his sleep-drugged eyes closed and he was lost in the only realm of complete relaxation that the human body knows.

Slowly and gradually as though through a thick, heavy fog, he heard the loud, raucous bark of Toby. Opening his eyes to the crisp air which positively crackled in the golden, heatless rays of the distant

morning sun, he found the big Malemiut tugging frantically at his blankets to awaken him.

He awoke to instantaneous life. Every nerve and cell functioned perfectly, as soon as he opened his eyes. No dull-eyed weariness oppressed him. His was the heritage of a healthy body. He sat upright and, for a second, gaped in startled surprise. Both his visitors had vanished!

There, to his right, were the crumpled blankets of Simpson. There, still closer to him was the indentation in the snow where the Winchester man had dozed. And there, almost directly in front of him, lay his revolver where he had thrown it. His fine, sensitive brows wrinkled in perplexed thought.

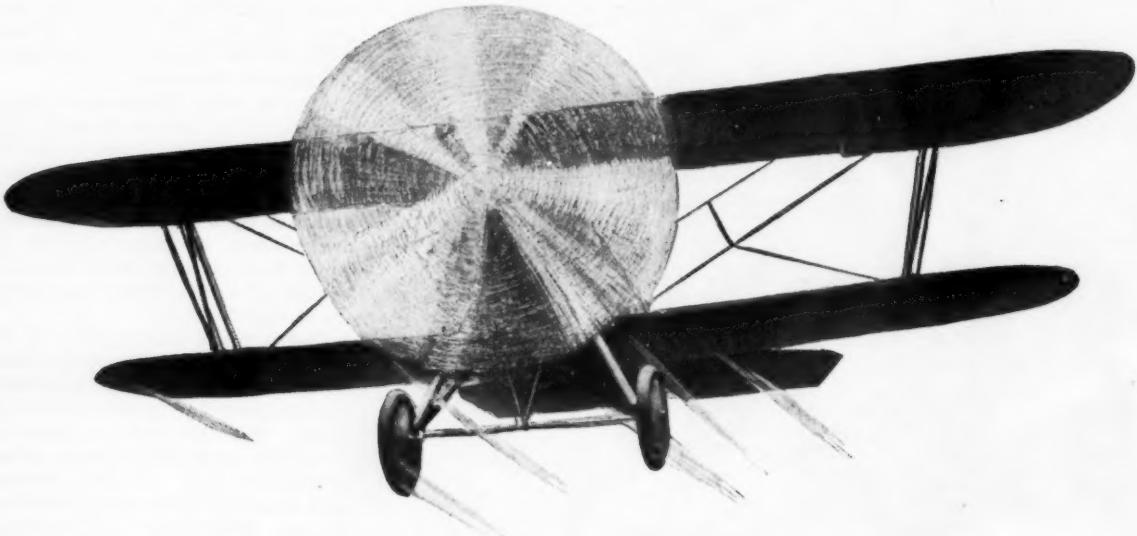
Casting his blankets aside, he came to his feet, and calling into play all his woodcraft he carefully examined the snow around the charred circle that marked the spot upon which the fire had been built. His keen eye immediately discerned the chipped spots on the frozen trail that had, undoubtedly, been made by a pair of heavy,

psychic unison. There, about a half mile ahead of them, they saw smoke. Thin, gray, wispy smoke, curling lazily toward the sky. Andy nodded to himself in satisfaction.

"I thought so, old boy," he remarked to the alert Toby. "It's the old shack that we've flown over a hundred times. I thought that at least one of them would be heading that way. Careful's the word from now on, old fellow."

Toby whined understandingly.

SWIFTLY, yet cautiously, they made their way through the towering forest, over the crackling snow, to the old shack. Andy pulled up short in the center of the trail, flinging an arm around the Malemiut as he did so. For, showing clearly before them through the timber, was the familiar outline of the cabin. Standing in sharp relief against the drab brown of the log walls was the flaming crimson jacket of the Northwestern Mounted Police. Andy could not be positive at the distance, but he was morally sure that the



hobnail boots. Searching even more meticulously, he noted that there were two trails, one almost obscuring the other.

It immediately came to him that one of his enforced guests had set off in the night only to be followed by the other. The question was, who had followed whom?

His next thought was of his plane. Had the ship been tampered with? True, he could think of no reason for this, but in such a night of mystery, anything was likely to happen.

HE raced from the head of the trail to the trim monoplane that glistened gaily in the morning sun. Toby scampered after him, barking madly in the sheer joy of nature's perfect morning.

Andy straightened up from the examination of the ship, scratching his head in utter perplexity. Nothing was wrong. He shrugged his shoulders, and turned away as Toby came running up to him, with a short, friendly growl, as though to remind his master that it was breakfast time. Andy patted the husky's wooly head, and smiled.

"We won't eat yet, old chap," he said. "We'll see if you and I between us can't pick up the trail and find out what it's all about."

The sun was high in the pale blue, cloudless heavens, when both man and dog suddenly looked upward in some

wearer of the tunic was the fellow he had succored the previous night.

The man in front of the cabin shaded his eyes from the snow's glare and cast a slow, searching glance over the entire valley. Evidently he saw nothing to arouse his suspicions, for in a moment he opened the heavy wooden door and entered the shack, closing it behind him.

For the first time Andy evolved a definite plan of action. He decided to stalk the man in the cabin. To stalk slowly upon him, get the drop before the other was aware of his presence, and demand an explanation of the mysterious doings of the night before. His hand reached to his belt for the .45, even before his mind had stopped functioning. Toby seemed to sense that at last the action which he craved was close at hand, for he uttered a low growl, thrust his chest forward, and followed Andy down the trail, for all the world like a soldier going into battle.

Andy made his way warily to the shack, seeking the friendly shelter of the trees as he approached, Toby emulating him and keeping his shaggy gray body close to the snow where it blended into a perfect camouflage.

For the second time that morning Andy stopped abruptly, every nerve tensed in his body. For there, creeping along the trail directly in front of him, was the man with the Winchester. The first thing that Andy

noticed, was that Winchester, for the other still had it grasped firmly in his hand.

Andy tugged the .45 from his holster, elated at his luck. For it seemed that both mystery men were about to be delivered into his hands. But Toby proved his undoing. Impatient at this persistent delay, Toby broke away from the restraining hand of his master and, uttering his awful, snarling war cry, plunged into battle.

The man with the Winchester swerved suddenly, but too late. As the rifle barrel came around, it struck the husky on the head, knocking him aside before the man could level his gun at either man or dog. Toby had renewed his savage onslaught. With the blood call of his ancestors drumming in his ears he sprang, a graceful, growling emissary of death. His lean, gray figure hurtled past the dull, cylindrical barrel and he was upon the Winchester man.

The latter flung his hand up to protect his throat, and that swift gesture alone saved him. He fell to the ground before the force of the attack, Toby gnawing viciously at his forearm.

SPEEDILY as this action had taken place, Andy was upon them. With one hand leveling the .45 at the prostrate man, he circled Toby's throat with his left arm, and with a soothing voice essayed to abate his fury.

Fondness for his master triumphed over the killer instinct in the dog. Releasing the other's arm, he stepped back into the blood-stained snow. A naive docility replaced the burning hate in his coal black eyes, as he gazed at Andy as though awaiting further orders.

Andy's gun still pointed steadily at the prostrate man.

"Give me that rifle," he demanded.

The other tendered the Winchester, and slowly rose to his feet, one arm hanging limply at his side.

"Stranger," he said, "you've got me wrong. I should have told you last night."

Andy smiled grimly, and glanced suggestively at the heavy .45.

"That doesn't matter," he replied. "You can tell me now."

The other's gaze wandered from the gun to the glaring husky.

"I don't seem to have much choice," he answered. "But I'll tell you the whole story anyway."

A harsh, sharp voice from up the trail, broke in upon them.

"You'll tell him nothing, at all. Put 'em up, both of you."

Two men and a dog turned startled eyes toward the voice. There before them stood the man who had called himself Simpson, still in the uniform of the Mounted. Beside him, nervously fingering a high Ross rifle stood a dirty, unshaven, furtive, short man.

"And keep your — dog where he belongs, or I'll blow his guts out."

Andy heard a snarl behind him which indicated that Toby was about to take up the attack. Fearful of the dog's fate, he turned sharply and shouted at him. The dog's look of fury changed to hesitancy and then to reproach, as he dropped his tail between his legs and stood silent.

Simpson turned to his companion.

"Bring 'em inside," he ordered.

The unkempt individual brandished his gun.

"March," he said, and jerked his head in the direction of the cabin. The strange procession moved forward. The dog in the lead, shaking his huge, intelligent head from side to side, as though pondering on the unfathomable ways of human beings. Then came Andy, grimly regretting his lack of alertness in the excitement of his first capture. Last, was the Winchester man, without his Winchester, his shooting arm dangling uselessly at his side, as he made vain attempts to stem the flow of blood with a gay, bandanna handkerchief.

Andy noted with some surprise, as he entered the old shack, that it gave indication of some one having been there for some time. Supplies lined the shelves and on a hastily rigged up clothes line, running across from wall to wall, were hung some recently washed shirts.

The man who called himself Simpson, shot a glance at Andy.

"Tie that mutt up over there. I've half a mind to kill him right now for what he did to me."

Andy stifled the hot reply that rushed to his mind, and did as he was bidden. The Winchester man spoke in a soft, quiet tone.

"Do you, gentlemen," he put the faintest accent on the last word, "mind if I use some of your water to bathe my arm in. I'm afraid I may outrage your hospitality by staining your floor."

SIMPSON growled assent and the other busied himself with his wound.

Simpson turned to his partner.

"Joe," he said. "We better get out of here. They'll probably be looking for this flying guy. We can tie them up and beat it with the dogs. We ought to hit the Alaskan border by sundown."

Andy, completing his job of tethering Toby, looked up.

"You men know who I am," he began. "If you're a policeman, I demand that you let me go. If you're not, I'll have the mounties on your trail."

Simpson laughed harshly.

"You wouldn't know a policeman if you saw one. The mounties can't get me. There's one of your lousy mounties now."

He pointed to the water barrel where the Winchester man was washing his torn arm.

The latter looked up with a grim smile.

"Yes," he said to the astounded Andy. "I'm a mountie. These thugs way. (Continued on page 46)

"WE'VE got to get out, Tyler. We've got to. They'll clear the border by dawn!"

...Then an icy grip of dread closed suddenly over each man's heart, for there came through the deathly stillness of the night, like an eerie warning of doom, a weird, shrill howl. Toby's ears froze to small, gray pyramids.

The wolf pack was hunting as the night came on!

MACFADDEN AVIATION ADVISORY BOARD

Don't you know?

Ask us!

We have had so many letters asking for information on model building and on aviation in general that it has been decided to conduct a department where our readers can obtain answers to their questions and solutions to the problems which arise in model building and the study of aviation.

For this purpose the Macfadden Aviation Advisory Board will conduct this department each month in **MODEL AIRPLANE NEWS**. This Board consists of a Chairman and three members who will meet at necessary intervals to discuss and endeavor to answer all questions. All answers will be accurate and authoritative.

Captain Edwin T. Hamilton, Editor of **MODEL AIRPLANE NEWS**, will act as Chairman of the Board. Captain Hamilton served with the Royal Air Force during the War, being the youngest commander of the London Defense Squadron at that time. He has been active in aviation since then in the United States and Brazil.

Mr. Jack B. Stinson, President of The Stinson School of Flying, is a member of the famous Stinson "flying family." He has fourteen years of flying to his credit and has flown more than two thousand hours. Mr. Stinson's wide experience in all branches of aviation ideally qualifies him for this Board. He is an expert on the subject of aviation instruction.

Mr. Frank J. Tietsort, noted science and engineering writer and aviation authority, was elected Honorary Member of First Pursuit Group, United States Army Air Corps in 1925, by unanimous vote of its combat flying officers, for advancing the cause of American aviation. Mr. Tietsort covered the arrival of the Army World Flight in Labrador in 1924 for 550 newspapers. At the request of his friend, Brigadier General William Mitchell, then Assistant Chief of Army Air Corps, piloted by Lester J. Maitland, who negotiated the Honolulu flight over the Pacific in 1927, he made a 7,000-mile trip over the United States, to report the conditions of flying fields and stations of the Army Air Corps. He has probably flown more miles than any other civilian in the United States.

IN this department each month the Macfadden Aviation Advisory Board will endeavor to answer all questions concerning model building and aviation in general. Address all questions to

**The
Macfadden Aviation Advisory Board,
MODEL AIRPLANE NEWS,
1926 Broadway,
New York City.**

Enclose with your letter a self-addressed and stamped envelope to facilitate an answer, as space is limited and all letters can not be answered in these pages.

Mr. Theodore T. Hawley served with the Royal Air Force during the War. He is a graduate of Yale University and enlisted as a Cadet in Canada. He served overseas as a flying officer, where he made an enviable record.

So here they are! Jack and Ed and Frank and Ted are mighty glad to meet you and are more than anxious to help you in every way they can. A good gang, aren't they, fellows? It isn't often you can hear direct from such fellows. But you can from these. They are just waiting to write the minute they hear from you, so write your letters. Ask any question you wish and watch the next issue of **MODEL AIRPLANE NEWS** for your answer from your four new friends.

Here is how it's done. Write any question you may wish to have answered concerning aviation or model building to:

**Macfadden Aviation Advisory Board,
MODEL AIRPLANE NEWS,
1926 Broadway,
New York City.**

In order to help them in their answer to you, enclose a self-addressed, stamped envelope with your letter, so that if they cannot answer all the questions in the magazine, they will send you a personal answer by mail.

So here goes!

The first letter we received was from Carl Burkhardt, 50 N. Long St., Williamsville, N. Y.

Gentlemen:

I am completing the model Dornier Super Wal and would like to know where to purchase the four blade propellers and the chain to attach to the gears.

Yours truly,
CARL BURKHARDT.

Answer:

Try your favorite supply house. They will probably have them and if not can easily advise you where they

can be obtained. For added experience why not try to make your own propeller? We believe you can do it if you try. Thanks for your letter, Carl.

Dear Sirs:

Would you please tell me if it helps to cover a non-cambered wing on the upper and under side?

Yours truly,

CHARLES MANGOLD,

1453 May St., Zanesville, Ohio.

Answer:

We do not know what type model you have, but if it is a scale model we advise you to cover both sides. Of course this depends on whether it will stand the increased weight, but if it will, the covering of both sides will greatly improve the appearance of your model.

Gentlemen:

I am a newsboy and sell papers at the airport here. I do it because I like to see the planes land and take off. I am crazy about flying and most of the flyers are real fellows. They are very kind to me.

The other day I heard one of them talking about a stall and I don't want to seem dumb, so I didn't ask them what that was.

Would you tell me?

Yours in a spin,

JOHN CARRIGAN,

2140 East 101st St.,
Cleveland, Ohio.

Answer:

A "stall," John, is when an airplane has lost the necessary speed for support or control. It works much in the same way an auto does when it stalls on a hill. If you try to drive a car up too steep a hill, the motor will stall and the car will slide backward unless you put on the brakes.

So will an airplane if you try to climb it too steeply. The motor stalls and the plane will slide backward.

It is very dangerous, unless you have plenty of height, as the nose of the plane will whip around and the plane will go into a steep dive. If you have height you can pull it out of the dive before you hit the ground. If not—flowers and slow music.

Hope you sell a thousand papers, John.

Dear Sirs:

I have just finished making a duration model airplane. Its propellers do not spin very fast. I have not yet tried it with everything completed, but thought I would ask you gentlemen about my motor first. I put 3/16" rubber on each motor (it has two), which is the right size. The book

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told me to give it a thousand turns, which I did, but the propellers spun very slowly.

My propellers are of very soft pine and carved very thin. Each one is a little smaller than it should be, but I did this because I thought they would spin faster. Can you tell me what is the trouble?

Very truly yours,
HENRY A. MARTIN.

Answer:

We could not answer your letter earlier because you failed to give us your address, so we hope you will find your answer here. As we cannot see the model, it is rather difficult to tell just what might be the matter, but we suggest that you make sure that there is no pressure on the bearings which spin the propellers.

Sometimes there is an excess of pressure, due to too much pull on the rubber, which proves to be a hindrance rather than a help in obtaining speed from a rubber motor.

Carefully check your bearings. See that your rubber motor does not fit too snugly, but has a slight slack in it. Remember that the tighter your motor fits the more pressure you have to overcome.

Do not be afraid to wind your motor up more than a thousand times. In testing a model of this nature, wind it up as much as you can until you think you have arrived at the point where the pressure of the rubber will tend to pull the model apart. At this point launch your ship.

Check your propellers to see that they are of the same weight and that there is no difference in size or shape between them. If you follow these directions, we feel sure you will locate the trouble and your model will fly.

Dear Sirs:

In your last issue I noticed that you offered to help any of us who were stuck and I'm stuck. I wish to construct a four-cylinder Whirlwind motor to be run with carbide gas, for a model, but I cannot find any means of ignition that will be light enough.

If it is possible to give me a boost on this point, I shall appreciate it.

Yours for more flying,
LAURENCE ECCLESTON,
Wakefield, R. I.

Answer:

We know of no method light enough to give the desired ignition. Even if you were to make a small spark coil, you would have to add batteries of some kind to the unit. These would add too much weight for a model to carry even though powered with a four-cylinder motor.

We are sorry to fail you in this question, but know of no solution whatever.

We wish you the best of luck.

Gentlemen:

We just received your first issue of your magazine and think it is just corking. We are interested in pictures of famous planes of 1927 and 1928 and hope you will have some.

We wish you the best of luck.

Yours for model aviation,
Hawk Model Aero Club,
R. LUNDELL, Secretary.

608 Beach 19 St.,
Far Rockaway, N. Y.

Answer:

We want to thank you for your boost. Sorry we haven't any such pictures at this time, but we print your request in hopes that some of the fellows will read it and send you the desired pictures.

We wish you a steady growth and the best of luck.

Ralph Johnsons of Dallas, Texas, writes and asks us fourteen questions.

Answer:

We are sorry but will have to ask you to send us a self-addressed, stamped envelope for your reply. You ask more questions than can be answered in the magazine.

You see, we are rather limited for space and we want to answer as many as we can in the magazine, but will be more than glad to answer all your questions if you will give us the envelope, so that we can mail your answer to you.

Good luck to you, Ralph.

That's all for this issue. Get your letters in early, boys, so that we can answer them as quickly as possible. Remember this is your Board, and it depends on you as to the amount of service they give. So write in early and make them work.

Macfadden Sky Cadets

Join this wonderful national organization by forming a club of your own in your own city or vicinity. If you already have a club formed that does not belong to a national organization, write in to the Macfadden Sky Cadets and get full information from them as to the wonderful opportunities which they offer individuals as well as clubs. Turn to page 18 and fill out the blank which you will find on that page. Let's go!

My Greatest Thrill

(Continued from page 20)

"Before I got into the plane I disappeared for a minute or two and I don't mind telling you that I took a couple of slugs of stimulant, and it wasn't coffee, either. Then I climbed into the ship. When we had made about three thousand feet I decided to make preparations.

"But what an ordeal it was for me! I fought myself for minutes that seemed hours before I finally got myself over the edge of that cockpit and, mentally saying good-bye to everybody and everything, somehow I contrived to get my body launched into the air. I started falling and simultaneously the thought came to me that just getting clear of the plane wasn't all there was to this thing.

"I HAD to pull the ring that released the pilot 'chute, which in turn pulls out the big 'chute, so I started fumbling for it. The first ring I got hold of was a part of my lifebelt and had nothing to do with the 'chute. I tugged and tugged at it, but nothing happened. Meantime I was falling hundreds of feet every minute. Then I discovered I held the wrong ring and began a careful and systematic search with my fingers to find the right one.

"Of course, I eventually found it, but meantime I was going through hell, I don't mind telling you, and the sweat stood out on my forehead. I gave her a yank and out came the little fellow. Suddenly, BANG! Like a pistol shot the big fellow had followed and bitten into the air. I gave a few mighty swings across a wide arc and then settled down, after the shock of the jerk, to that taste of heaven which comes—that great sensation of relief which follows the knowledge that one's parachute has functioned.

"After that I enjoyed it and I didn't care particularly whether I broke a leg on landing or not. But I came down fine, with a little jar, of course—and that was a whole lot of that! I made other jumps later, and although I never got over that terrible feeling entirely when one trusts himself to that little wire mechanism, I've never been able to kid myself or anybody else that I had made that first leap nonchalantly. I didn't, that's all."

THRILLS

Each month MODEL AIRPLANE NEWS will carry a short story entitled "My Greatest Thrill" such as the one which you have just finished.

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Model Airplane News

Dept. 7,

1926 Broadway,

New York, N. Y.

through his teeth as his bloody arm was roughly handled. The two chairs of which the room boasted were called into play. The men were lashed firmly side by side facing the small window.

"O. K." said Simpson. "You can watch us hit the trail."

HE walked to the front of the cabin, and with strong hands ripped up a loose plank. Bending over he unearthed a canvas sack upon which Andy plainly saw the words, "The Greysen Lumber Co."

He held the bag up for Andy's inspection.

"There's your payroll," he said gloatingly.

Andy struggled ineffectually with his bonds and Toby tied to a stanchion in the wall gave vent to a rumbling growl.

Joe, who had suddenly disappeared behind the cabin, came into view at the doorway, with the pack train. The dogs, weary of inactivity, were snapping savagely and eager to be off.

Joe leaned through the open door. "Ready, Simpson?"

Simpson shouted a reply and hastily throwing several cans of food into a sack, joined his partner. On the threshold he paused and surveyed his two captives sardonically.

"So long," he said mockingly. "Here's one man the Northwestern won't get."

With a wave of his mittened hand he was gone, his stentorian shout of "Mush" reverberating back from the frozen trail.

Andy twisted his head uncomfortably in the direction of his fellow prisoner.

"Well," he remarked grimly, "they didn't gag us."

The other grunted in disgust.

"A lot of good talking will do us," he retorted sourly. "By noon tomorrow they'll be in Alaska."

"If we can only get loose somehow, we have a good chance of getting them in the plane."

The mounted policeman's eyes gleamed for a moment in pleasant anticipation.

"Let's try," he said shortly.

For the next half hour neither spoke. Each squirmed and struggled violently in an attempt to break the restraining cords. Even Toby, sensing the try for freedom, jerked violently at the stout rope which tethered him to the wall.

Hours passed and sweat stood out on the mountie's brow. He ceased a particularly violent struggle with his bonds, then spoke.

"We've got to get out, Tyler. We've got to. They'll clear the border by dawn."

Andy was silent. For the past few minutes his mind had been grappling with the problem that confronted them.

"Steady," he counseled. "I have an idea. It's a long shot but I'll try it."

A wild hope gleamed in the other's eye as Andy by dint of difficult ma-

neuvering juggled the chair to which he was bound, across the wooden floor, until it was within reach of Toby. The animal greeted him with a delighted bark, and leaped up with his forefeet on Andy's lap. With a concerted effort Andy turned the chair completely around presenting his back to the animal. Toby watched this action, a puzzled look in his eyes. Finally he trotted around to the front of the chair again. Again Andy repeated the maneuver. Again Toby registered the same reaction.

Then an icy grip of dread closed suddenly over each man's heart. For there came through the deathly stillness of the night, like an eerie warning of doom, a weird, shrill howl. Toby's ears froze to small, gray pyramids. *The wolf pack was hunting as the night came on.*

If they were to make the plane, no time was to be lost. Andy at last made himself understood to the big Malemiut, and seizing his muzzle between his two bound hands, he forced his sharp white teeth down on constricting cords. With a low whine of understanding the animal proceeded to work. The keen, canine molars scraped Andy's flesh until the blood came, but he could feel the gradual weakening of his bonds. He spoke encouragingly to his rescuer, and the animal redoubled his efforts.

AGAIN through the thick cabin walls floated that ominous throaty howl; much closer this time. Toby hesitated momentarily in his labors as the wolf cry ran through his blood.

At last, Andy, with a cry of triumph, flung his bloody arms over his head in a gesture of freedom. Quickly his numbed fingers sought the restraining cords around his feet. In another instant he hurled the chair from him and was free!

With his hunting knife he slashed the other's bonds.

Jorgenson, the policeman, stood up and gripped Andy's hand for a silent moment. Their eyes met for a second.

"Thank him," said Andy tersely indicating the dog.

The sun had long since disappeared and was replaced by a frigid ghostly, arctic moon. Andy cast a swift glance through the window.

"Look," he gasped pointing out to the moon-flooded snowy waste. Jorgenson's gaze followed Andy's outstretched arm. There out upon the ice, thrown into sharp relief by the white background, moved a handful of howling black dots; and leading them in their rush toward the cabin was a huge, gray beast flinging his death song to heaven as he charged like a gray phantom to the kill.

Andy sprang into action. Thrusting a brand into the dying fire, he prepared an improvised torch. Jorgenson followed suit. Their flaming sticks held before them and the snarling, battle-craving husky between, they stood for a grim moment before the door.

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"Ready?" said Andy.
"Ready," said the other between clenched teeth. Andy flung the door wide open.

The onrushing pack hesitated as that hated weapon of man—fire-blazed full in their gaunt, cadaverous faces. Hate crackled in their eyes and the blood lust was strong upon them, but not yet strong enough to overcome their awful dread of the searing brands. Toby tugged desperately at Andy's restraining hand which kept a firm grip upon his collar. And holding their blazing weapons behind them they made their way through the firs to the clearing which held the plane.

One thought burned simultaneously in each man's brain. Would the brands burn until the plane was reached? The snarling pack trailed them cautiously at the edge of the circle of light; their avid cries rending the air, saliva dripping from their cruel jaws. At last, some fifty yards in front of them, they sighted Andy's ship.

"Run for it," said Andy, as he looked at the flickering brands, "they can't last long."

THEY broke into a run across the snow, Andy flinging his dying torch at the pack, as Jorgenson dashed to spin the prop. As Andy revved the motor, Jorgenson's own torch died and he sprang for the cockpit. With a screech of hate the howling leader was upon them. Transforming the useless torch to a whirling club, Jorgenson desperately beat him off, and made the cockpit, where Andy was frantically trying to prevent the snarling Toby from leaping to his death in the midst of the howling pack. As the leader recovered and charged ahead of his hunger-driven cohorts, the biplane started to taxi slowly across the snow. She gained momentum and was about to outdistance the brutal savage death behind her when the leader and a huge black comrade, driven to fury by this apparent frustration, wailed a savage death dirge and leaped upon the moving fuselage.

As the runners left the ground the snapping wolves had almost gained the cockpit. Andy jerked back on the stick and zoomed nearly perpendicularly in a desperate attempt to rid the plane of the slashing death so near them. But before he could complete the maneuver, Toby, unleashing a devastating cry of battle, was upon the hated foe. Andy hastily flattened out in an endeavor to prevent the husky from plunging to earth with the wolves. At the rear of the cockpit they struggled. Jorgenson, seizing a wrench from the cabin floor, aimed it at the leader's head. Again Toby was before him and with the black brute's fang sinking in his shoulder he plunged at the leader; a sickening crunch indicated that he had found the gray beast's throat. Ignoring the pain and blood caused by the black wolf's tearing teeth he hung on tenaciously.

Jorgenson again brought down the wrench, this time with more success. The black released his grip and with a howl of pain leaped at the man. For a third time, Jorgenson raised his iron weapon and swung it. This time striking for his very life. The wrench found its mark and, with a fearful cry, the wounded beast hurtled through space towards the fir tops. At the same moment Toby released his death grip on the leader; the wolf lay still. Contemptuously Toby pushed the creature with all the force of his sturdy forefeet, and down, down, plunged the leader, a bloody meal for the raging pack below.

TOBY crawled back into the cockpit licking his jagged wound. Jorgenson wiped the husky's shoulder with his handkerchief, as Andy opened wide the throttle and they sped toward the Yukon and their quarry. Through the moonlit night they winged their way, the prop blade beating at the icy air like a thousand eagles' wings; the engine roaring tremendously as her twelve cylinders yielded up every ounce of their power.

Disappointment welled in each man's breast as towering Mount Campbell loomed in the distance, and still their prey had not been sighted.

Suddenly, Jorgenson shook the young pilot excitedly. His lips moved but his words were lost in the pounding of the Liberty. Andy shot a quick glance over the cockpit's side. There, far below him, bathed in liquid moonlight, was a dark mass upon the ground. Andy killed the motor and the plane's nose dropped in a hawk-like dive. His altimeter indicated a scant four hundred when he leveled out. Horror was stamped indelibly on each man's countenance as he gazed at the sight below.

There, surrounded by a circle of sated, baying wolves was a dog-sled. Blood stained the immaculate snow. A half dozen teeth-torn huskies lay motionless in their harness. The timber wolves were hunting with a vengeance that night!

Andy brought the ship down, sliding her gracefully across the ice. The blood-sated pack, their courage gone with their hunger, fled incontinently—a trotting gray mass—into the forest. The two men sprang from the plane and headed for the dog-sled. They found what they searched for. There, flung carelessly on the wind-swept seat was the dirty canvas money-bag. And from under the sled protruded the ghastly remnants of two men. In the lucid moonlight, torn patches of a scarlet and gray uniform were visible.

Simpson had spoken truer than he knew. He was one man that The Royal North Western Mounted Police would never get.

Two men and a dog were silent as Andy took off and headed for home. But the silence cemented more firmly than words the strong bond that holds those who face danger together.

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WHO MURDERED OLD MISER GIBBS?

PHANTOM OF THE COAL FIELDS

WAS THE FAMOUS BOOHER CASE SOLVED BY MIND-READING?

THE TRAIL TO THE LOCKED ROOM

WHO KILLED ELSIE SIGEL?

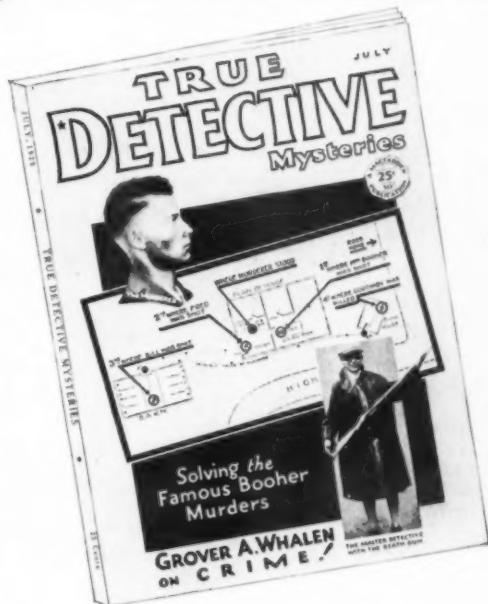
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